

REPORT BY THE  
AUDITOR GENERAL  
OF CALIFORNIA

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AN AUDIT OF THE  
CALIFORNIA DEPARTMENT OF CORRECTIONS'  
PROGRAM MANAGEMENT CONTRACTOR

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Kurt R. Sjoberg  
Acting Auditor General

February 1, 1989

P-847.1

Honorable Elihu M. Harris, Chairman  
Members, Joint Legislative  
Audit Committee  
State Capitol, Room 2148  
Sacramento, California 95814

Dear Mr. Chairman and Members:

The Office of the Auditor General presents a report prepared under contract by Arthur Young concerning the performance of the California Department of Corrections' contractor for program management services.

This audit was conducted to comply with Item 5240-001-747 of both the 1988 Budget Act and the "Supplemental Report of the 1988 Budget Act."

Respectfully submitted,

A handwritten signature in cursive script, reading "Kurt R. Sjoberg".

KURT R. SJOBERG  
Acting Auditor General

**Office of the Auditor General**

**An Audit of the  
California Department of  
Corrections' Program  
Management Contractor**

**FINAL REPORT**

**February 1989**



**Arthur Young**

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**P-847**

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OF CORRECTIONS PROGRAM MANAGEMENT  
CONTRACTOR**

**February 1989**

**ARTHUR YOUNG**



## **TABLE OF CONTENTS**

	<b>Page</b>
<b>SUMMARY</b>	<b>S-1</b>
<b>INTRODUCTION</b>	<b>1</b>
<b>AUDIT RESULTS</b>	
I.    KITCHELL CEM'S OVERALL APPROACH AS PROGRAM MANAGER REPRESENTS A HIGH DEGREE OF COMPETENCY IN KITCHELL'S ASSIGNED PRE-CONSTRUCTION RESPONSIBILITIES	I-1
Conclusions	I-9
Recommendations	I-9
II.   KITCHELL CEM'S PERFORMANCE OF ITS CONTRACT RESPONSIBILITIES IS ACCEPTABLE	II-1
Conclusions	II-12
Recommendations	II-12
III.  THE MULTIPLIER OF DIRECT SALARIES NEGOTIATED WITH KITCHELL IS HIGH, ALTHOUGH KITCHELL'S COMPENSATION RATES ARE LOWER THAN RATES THE FIRM CHARGES OTHER GOVERNMENT CLIENTS	III-1
Conclusions	III-11
Recommendations	III-12
IV.   CERTAIN METHODS OF OPERATION OF THE CDC NEW PRISON PROGRAM COULD BE IMPROVED	IV-1
Conclusions	IV-4
Recommendations	IV-5

V.	KITCHELL CEM DID NOT INCUR THE MINIMUM LEVEL OF DIRECT EMPLOYEE BENEFIT EXPENSE AS SPECIFIED IN THE CONTRACT, AND THEREFORE, THE BILLING RATES USED BY KITCHELL SHOULD BE REDUCED RETROACTIVELY	V-1
	Conclusions	V-4
	Recommendations	V-7
VI.	KITCHELL CEM'S BILLINGS TO THE CDC ARE GENERALLY IN ACCORDANCE WITH THE TERMS OF THE CONTRACT	VI-1
	Conclusions	VI-5
	Recommendations	VI-5

**APPENDICES**

A	DELIVERY PERFORMANCE OF SELECTED NEW PRISONS IN OTHER STATES
B	DESCRIPTION OF THE CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN
C	KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED TO CALIFORNIA STATE PRISON, IN KINGS COUNTY AT CORCORAN
D	CONTRACT SCOPE OF SERVICES
E	COST CONTROL REPORT-DEFINITION OF COLUMNS PRESENT IN REPORT

	<b>Page</b>
<b>RESPONSE TO ARTHUR YOUNG'S REPORT</b>	
KITCHELL CEM	R-1
<b>THE ARTHUR YOUNG COMMENTS ON THE RESPONSE OF KITCHELL CEM</b>	R-4
<b>RESPONSE TO ARTHUR YOUNG'S REPORT</b>	
YOUTH AND ADULT CORRECTIONAL AGENCY Office of the Secretary	R-5

## SUMMARY

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### RESULTS IN BRIEF

The California Department of Corrections (CDC) has paid approximately \$30 million over the last six years for program management services relating to the design and construction of new prisons. The purpose of this examination was to evaluate the terms of the CDC's contract for program management services and to evaluate the performance of the program management firm.

In our performance audit of Kitchell CEM we found that Kitchell's overall approach as Program Manager fully meets the performance objectives of the contract between Kitchell and the CDC. Also, we found that Kitchell's performance of its contract responsibilities is acceptable.

The multiplier of direct salaries negotiated with Kitchell, which determines hourly billing rates, is high relative to the average multiplier allowed by the California Department of Transportation on all of its current engineering consulting contracts. However, the billing rates Kitchell charges to the CDC are less than the billing rates Kitchell charges to its other California local government correctional clients.

Kitchell has billed the CDC for overtime hours worked by exempt salaried employees who are not compensated for such overtime. This practice is in accordance with the contract terms as negotiated with the CDC but is not a practice allowed by the federal government, Caltrans, and other states contacted during this audit.

We found certain methods of operation of the CDC new prison program could be improved.

We have found that Kitchell has not incurred the level of employee benefit expenses which were originally estimated when determining the billing rates in the contract and, therefore, the billing rates used by Kitchell should be reduced retroactively.

Kitchell is generally billing for labor and reimbursable expenses in accordance with their contract with the CDC. Certain overhead items related to equipment and insurance expenses could not be tested, as the expenses to be tested were not clearly defined in Kitchell's contract.

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**PRINCIPAL FINDINGS**

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**Kitchell CEM's Overall Approach as Program Manager Represents a High Degree of Competency in Kitchell's Assigned Pre-Construction Responsibilities**

Kitchell CEM's contract duties include the planning, bidding and award phases of each new prison. Kitchell then assists the California Department of Corrections, as requested, during the construction phase. Kitchell's overall approach as program manager, as evidenced by schedule, cost and quality performance on over \$1 billion worth of completed projects, complied fully with contract requirements. Kitchell employees are well qualified, overall cost performance of new prisons is a very credible achievement, overall scheduling performance is rated very good, and the CDC personnel who operate the new prisons are satisfied with the overall quality of the facilities.

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**Kitchell CEM's Performance of its Contract Responsibilities Is Acceptable**

Documentation on a representative new prison was reviewed in some detail to assess the professional performance of Kitchell CEM. Their performance was reviewed considering the scope of services set forth in the contract agreement (and subsequent amendments) between Kitchell and the Department of Corrections. Kitchell's performance was found to be of professional quality and in full accordance with the intent of its contract with the CDC.

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**The Multiplier of Direct Salaries Negotiated with Kitchell is High, Although Kitchell's Compensation Rates Are Lower Than Rates the Firm Charges Other Government Clients**

The multiplier of direct salaries, which determines the personnel hourly compensation rates paid by the California Department of Corrections to Kitchell CEM, has been reduced over the last four fiscal years. The multiplier has been reduced from 3.36 in fiscal year 1985/86 to 3.12 in fiscal year 1988/89. However, this multiplier is sixteen percent higher than the average multiplier utilized by the California Department of Transportation on all of its current twenty-three engineering consulting contracts. For comparison, the multipliers for the twenty-three Caltrans contracts ranged from 2.09 to 3.28.

Because of the high multiplier it appears the compensation rates paid to Kitchell employees on CDC projects may be high.

Although the multiplier is high, the compensation rates which the CDC has effectively negotiated with Kitchell are still less than the compensation rates paid to Kitchell by all of its current California local government correctional clients.

Kitchell is being paid for overtime hours worked by exempt salaried employees, but these overtime costs are not being incurred by Kitchell. These payments are in accordance with the contract terms as negotiated by the CDC. However, such payments are not common practice in other government work for cost reimbursable type contracts.

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**Certain Methods of Operation of the CDC  
New Prison Program Could Be Improved**

As program manager, Kitchell CEM has responsibility for detailed execution of a new prison project from initial planning through award of the final construction contract. A separate construction manager then has responsibility for detailed execution of the construction program for each new prison. The California Department of Corrections, under the direction of its project director, has responsibility for managing the overall program, managing the several prime contractors (the program manager and various construction managers), and for coordination and integration of CDC and contractor work efforts. While the CDC's chosen organization has been effective in delivering new prison capacity, the potential for interface gaps or misunderstandings is increased. Certain functions provided by the program manager are not formally assigned through completion of occupancy but, rather, remain at the option of the individual CDC project director and functional staff.

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**Kitchell CEM Did Not Incur the Minimum  
Level of Employee Benefit Expenses As  
Specified in the Contract and, Therefore,  
The Billing Rates Used by Kitchell  
Should Be Reduced Retroactively**

Kitchell CEM's contract with the CDC specifies that if Kitchell does not pay employee benefits (e.g., payroll taxes, health insurance, and bonuses) greater than or equal to a defined percentage of direct salary for the 1986, 1987 and 1988 contract years, the CDC will retroactively adjust the rates of payment for labor billed by Kitchell. This defined percentage of direct salary is based on an estimate of what Kitchell's employee benefit expenses will be for the year. The retroactive adjustment process allows the CDC to adjust the billing rates in the contract to reflect Kitchell's actual employee benefit expenses.

We found that Kitchell did not incur the minimum level of employee benefit expenses for any of the three years and, therefore, the billing rates used by Kitchell should be reduced retroactively. We estimate that the amount to be recovered will be \$303,510.

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**Kitchell CEM's Billings to the CDC  
are Generally in Accordance with  
the Terms of the Contract**

Kitchell CEM (and its predecessor, Rosser/Kitchell) charge the CDC for services by billing for time worked by approved individuals using rates for approved positions as defined in the contract between Kitchell and the CDC. We found that Kitchell is properly billing labor charges in accordance with the provisions of the contract. The hours charged were supported by timesheets, and the labor rates used were appropriate. It should be noted that the finding directly above concludes that the rates in the contract should be adjusted downward for the 1986, 1987 and 1988 contract years. Reimbursable expenses billed to the CDC were within contract maximums.

The contract allows the CDC to verify certain items of overhead submitted by Kitchell during the negotiation process. As the contract does not specify exactly what was submitted, we could not verify these items.

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**RECOMMENDATIONS**

The following recommendations are made regarding the CDC and its program management contractor:

- The CDC should continue present efforts to reduce the number of design and construction packages at the site consistent with schedule requirements in order to minimize interface problems.
- The CDC should request that Kitchell analyze and review each contract change order and schedule change during construction in order to provide prompt feedback for future projects and to enable a critique of initial planning concepts. Kitchell currently performs this responsibility for Phase III projects and should be requested to continue this for any other new projects.
- The CDC should request that Kitchell prepare Monthly Cost Control and Monthly Schedule reports throughout the construction phase for all projects for which the firm performed initial planning estimates.

- The CDC should request that Kitchell use the detailed information available from the original design negotiations to monitor the progress of A/E firms. The program manager should develop an A/E performance measurement system based on the completion of certain specified tasks and in accordance with an agreed upon schedule with the A/E firm.
- The CDC should not competitively bid contracts for both design and construction of projects based on conceptual performance standards for fast-track projects. Rather, the CDC should continue the practice of negotiating with the most qualified firm for design work, and then competitively bid construction from the detailed design. This recommended method is the approach that the CDC most often uses for its new prison program.
- The CDC should obtain information on compensation rates and direct salary multipliers paid by other California state agencies for similar engineering work as part of its pre-negotiation preparations. The CDC should justify the final multiplier negotiated with the program manager, if that multiplier is significantly higher than documented industry averages.
- The CDC should revise the program manager's contract to require the program manager to bill each employee based on that employee's direct salary and the negotiated multiplier. This is different than terms of the current contract which allows the program manager to use the same billing rate for all employees within the same discipline. With this recommended change, the CDC then would be billed for actual costs for an employee based upon the agreed upon multiplier negotiated with the program manager.
- The CDC should revise the compensation terms for future program management and construction management contracts to prohibit payments for costs not incurred. The CDC should establish a separate billing rate for overtime that reflects the actual costs to Kitchell for overtime work.
- At the annual renegotiations of existing contracts for program management and construction management, the CDC should eliminate payments for overtime charges which are not incurred by the contractor.
- The CDC should request the program manager to review the current cost control report and the construction manager's monthly progress report. The program manager then should make recommendations to the CDC for modifications to one or both of these reports so that a current and accurate forecast of the at-completion cost of each new prison can be issued monthly.



- The CDC should request the program manager to review the construction manager's monthly progress reports and make recommendations to the CDC on a standard format for reporting actual summary level progress on construction and occupancy milestones. The format also should forecast completion and occupancy dates in a manner consistent with original objectives as developed on each new prison. The CDC is currently developing such a standardized report format.
- The CDC should implement post-occupancy reviews in accordance with procedures already written. The program manager should be actively involved in the process and act on the results where design is affected.
- In order to implement the above recommendations, the CDC should request the program manager and necessary staff to monitor overall cost, schedule, and quality considerations in support of the CDC project director throughout the project.
- The CDC should request Kitchell to develop a monthly report which highlights cost and schedule status, and forecasts for each project in an executive summary format useful to CDC management.
- The CDC should recompute the billing rates to be used by Kitchell CEM for the 1986, 1987 and 1988 contract years, based on the actual level of employee benefit expense incurred by Kitchell. These adjusted rates should be applied to the hours charged by Kitchell CEM to determine amounts due to CDC. We estimate the amounts to be recovered will be \$57,862, \$169,612 and \$76,036 for the 1986, 1987 and 1988 contract years, respectively.
- The CDC should incorporate into future contracts clarification of certain items with regard to bonus and education expenses which are included as employee benefit expenses. For bonuses, the contract should state who is eligible to receive bonuses and how they are to be divided among the eligible personnel. If the distribution is at Kitchell's discretion, this should be noted in the contract. The contract should have a time limit for paying accrued bonuses. When determining what an appropriate time limit should be, the CDC should consider their own timing for reviewing Kitchell's benefits, so that accrued bonuses are paid before the CDC internal auditors arrive at Kitchell. The types of educational expenses that will be considered acceptable should be clearly defined, so that both the CDC and Kitchell will know what is allowable.

- The CDC should establish in the contract the timeframe for their internal auditors to review Kitchell's actual expenses related to employee benefits or those overhead items (insurance and equipment expense) which may cause the billing rates to be reduced retroactively. The CDC's review of these items can only decrease the billing rates used by Kitchell, so it is to the CDC's advantage to determine the actual level of these expenses as quickly as possible.
- The CDC should include in the contract the exact dollar amount of the two overhead items (currently insurance and equipment costs) which are subject to verification by the CDC. In addition, all other overhead items which are included in the multiplier should be defined in the contract and subject to verification.
- The mechanism to be used by the CDC to reduce the billing rates and collect any amounts due should be defined in the contract. If it involves adjusting the employee benefit or overhead multipliers, then the original multiplier and supporting calculations should be incorporated in the contract.

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#### AGENCY COMMENTS

Overall, Kitchell CEM is very pleased with the audit results. However, they did respond to a few areas specifically.

Kitchell feels that the conclusion that their multiplier is higher than an average of multipliers obtained on Caltrans engineering contracts implies that the Kitchell multiplier is too high, when in fact Kitchell believes they are competitive. Kitchell states that the finding compares Kitchell's single contract with an average of others and that the average fails to communicate clearly the range from which it was established.

Kitchell states that the issue of overtime payment has been considered numerous times from the standpoint that businesses generally do not provide service at no cost and, therefore, should be paid for overtime hours. They also point out that the CDC pays Kitchell for overtime at a reduced rate in recognition of reduced costs incurred by Kitchell.

Kitchell agrees that clarification is necessary for the allowable items for employee benefits and the payment of bonuses. However, they do not want the CDC to direct the decision on how to pay bonuses.

Kitchell further points out that the audit report's recommendation to avoid the use of design/construct contracts and performance standards refers to the cogeneration plant at Corcoran. They believe that the issue at Corcoran is one of equipment performance, which could occur with any contracting method and is not a result of the use of design/construct.

The CDC is very pleased with this audit. They state that they concur with many of the recommendations and will implement some of them. The CDC will study other recommendations to determine if the benefits gained from their implementation justify the additional costs.

As regards to Kitchell's multiplier, the CDC feels that Kitchell's multiplier should be compared to the range of Caltran's contract multipliers rather than the average. The CDC states that there are a number of reasons why multipliers will be different between firms.

The CDC feels it is most important to look at the total billing rates paid for consultant staff. They state that these rates provide a more realistic comparison than solely the multiplier factor.

## INTRODUCTION

### BACKGROUND

The State of California has been engaged in a massive prison construction and renovation program for over seven years. The genesis of this program was a "master plan" prepared for the California Department of Corrections (CDC) in 1979. Revisions to this master plan were ordered by the Legislature in 1980, and some initial construction work started that year. But it was not until after voters approved the first of several prison construction bond acts in 1981 that funds were available for large scale, multiple facility development projects.

For many state building projects, the Department of General Services is responsible for the planning, design, and construction oversight functions. Because of the specialized nature of corrections facility construction, these functions are the responsibility of the CDC whenever prisons are involved.

In 1981, the CDC decided that the size of its projected building program would necessitate the employment of specialists to help in managing all related activities and to coordinate the work of other contractors, as well as perform selected tasks in support of the program. A Request for Qualifications was issued and, eventually, the joint venture of Rosser/Kitchell was selected as the CDC's program manager beginning July 1, 1982.

After selection based on qualifications, billing rates and other fiscal matters were negotiated with Rosser/Kitchell before an official contract was agreed upon. Effective March 1, 1984, Kitchell CEM (Kitchell) purchased Rosser's share of the joint venture. Kitchell CEM is a wholly-owned subsidiary of Kitchell Corporation.

Through June 1, 1988, the initial contract had been amended 17 times. The amendments have changed both the scope of services to be provided by Kitchell and the method of compensation under the contract.

The original contract, dated July 21, 1982, stated that Kitchell would be paid a lump sum of \$926,500 for services to be rendered from July 21, 1982, through December 31, 1982. Subsequent amendments required that Kitchell charge CDC on a per-hour basis for time worked providing service to CDC, based on hourly rates and classifications of staff negotiated by CDC and Kitchell. The hourly rates vary by classification (e.g., principal, estimator, or engineer), and are to include Kitchell's salary costs, employee benefit expense, overhead, and profit.

Amendments 7, 11, and 14 provide that CDC can retroactively adjust the billing rates in the contract if actual employee benefits paid by Kitchell are less than specified percentages of direct wages. Also, contract amendments have specified certain types of reimbursable costs which Kitchell can pass directly through to the CDC. At different times, these costs have included travel, recruitment, special consultants, data processing, and relocation. Through June 30, 1988, CDC had paid approximately \$30 million to Kitchell for program management and engineering services and reimbursable costs passed through to CDC.

#### SCOPE AND METHODOLOGY OF PERFORMANCE AUDIT

The objectives of the Kitchell CEM performance audit were as follows:

- Evaluate the services provided by Kitchell
- Evaluate the terms of the contract
- Evaluate the compensation rates paid to Kitchell
- Evaluate alternative types of contracts for program management services, and alternative payment methods
- Determine if necessary, recommend changes to the existing contract with Kitchell, and whether future program management contracts should differ from the current contract in specific areas.

The performance audit began with a review of the contract between Kitchell and the California Department of Corrections to determine generally Kitchell's responsibilities and scope of work. We reviewed the functional organization established by Kitchell, and identified the personnel assigned and their qualifications to determine how Kitchell had organized its project team to perform program management responsibilities.

A random sample was selected of all Kitchell employees who worked a significant number of hours on CDC projects, and the qualifications, education, and experience of each were reviewed. We reviewed Kitchell's personnel files for each person in our sample to determine their professional and educational histories. After reviewing their backgrounds, we interviewed selected individuals from our sample.

Six of the largest new California prisons were selected, and the costs and schedules of each were evaluated. Documentation from each of the six prisons was reviewed in order to evaluate the general performance of Kitchell as program manager.

We next chose the California State Prison at Corcoran for a detailed review of Kitchell's performance in fulfilling each area of its contractual responsibilities. Relevant documents from the Corcoran facility were gathered and reviewed. We used key cost impact areas and traced Kitchell performance documents to see what controls were used and what actions were taken, and evaluated the appropriateness of each. We also visited Corcoran and interviewed the on-site construction manager and the CDC personnel in charge of facility maintenance.

To further support our analysis of the quality of Kitchell's service we attempted to identify construction projects in other states which were comparable to the construction projects in the CDC's new prison construction program. We gathered information about the new prison construction programs in six other states, including costs and schedules.

We evaluated the compensation rates which the CDC has negotiated with Kitchell, including a comparison of these rates to rates Kitchell has negotiated with all of its California local government correctional clients. We also compared the multiplier negotiated by the CDC with Kitchell to multipliers negotiated by the California Department of Transportation (Caltrans) with all twenty-three consulting engineer firms currently under contract.

To obtain additional information, we interviewed ten A/E firms regarding their compensation rates and the CDC/Kitchell program manager contract. However, because we could not promise confidentiality to the A/E firms the results of the interviews are not published in this report.

The procedures outlined above allowed an evaluation of the terms of the contract and an evaluation of alternative types of contracts and payment methods for program management services. Based on this review, we developed recommended changes to the contract between Kitchell and the CDC, and suggested changes to be included in any future program management contract.

#### SCOPE AND METHODOLOGY OF FINANCIAL AUDIT

The purpose of our financial examination and evaluation was to determine if Kitchell's billings to the CDC were in accordance with the terms of its contract, as amended. Our scope included all billings from the inception of the contract on July 21, 1982, through the contract year ended June 30, 1988. The examination was conducted in two primary areas. The first area was based on provisions in Amendments 7, 11, and 14 of Kitchell's contract. These provisions allowed the CDC to audit certain employee benefit costs of Kitchell. If these employee benefit costs were not incurred, the contract allowed the CDC to retroactively adjust the billing rates contained in the contract. These costs were primarily payroll taxes, health insurance, other benefits, and bonuses. These costs are to be reflected in the fully loaded hourly billing rates, and are not billed as a separate line item. To audit these costs, we obtained supporting documentation from Kitchell and verified this documentation by tracing to invoices, canceled checks, tax filings, and other original documents.

Amendments 11 and 14 also allowed the CDC to audit certain insurance and equipment costs that were submitted by Kitchell during the negotiation of the 1987 and 1988 contract amendments. If these costs were not incurred, the contract allowed the CDC to retroactively adjust the billing rates contained in the contract. These costs are to be reflected in the fully loaded hourly billing rates, and are not billed as a separate line item.

The second area of our examination was designed to verify that the monthly bills submitted to CDC by Kitchell were in accordance with the contract terms. This included testing to determine if labor charges and reimbursable expenses billed were appropriate and within the limitations of the contract, as amended. Our procedures to test labor billings included a detailed analysis of a statistical sample of labor charges to determine if the billing rates and classifications for each employee were correct. For reimbursable

expenses, our procedures included analyzing invoices and comparing charges to contract maximums. As a part of the procedures above, we tested to see whether Kitchell charged the CDC for labor or reimbursable expenses which should have been charged to other Kitchell clients.



**I.****KITCHELL CEM'S OVERALL APPROACH AS  
PROGRAM MANAGER REPRESENTS A HIGH DEGREE  
OF COMPETENCY IN KITCHELL'S ASSIGNED  
PRE-CONSTRUCTION RESPONSIBILITIES**

Kitchell's contract duties include the planning, bidding, and award phases of each new prison. The CDC then assigns primary responsibility for the construction phase to one or more construction management firms (CM) for each new prison. Kitchell assists the CDC as requested during the construction phase.

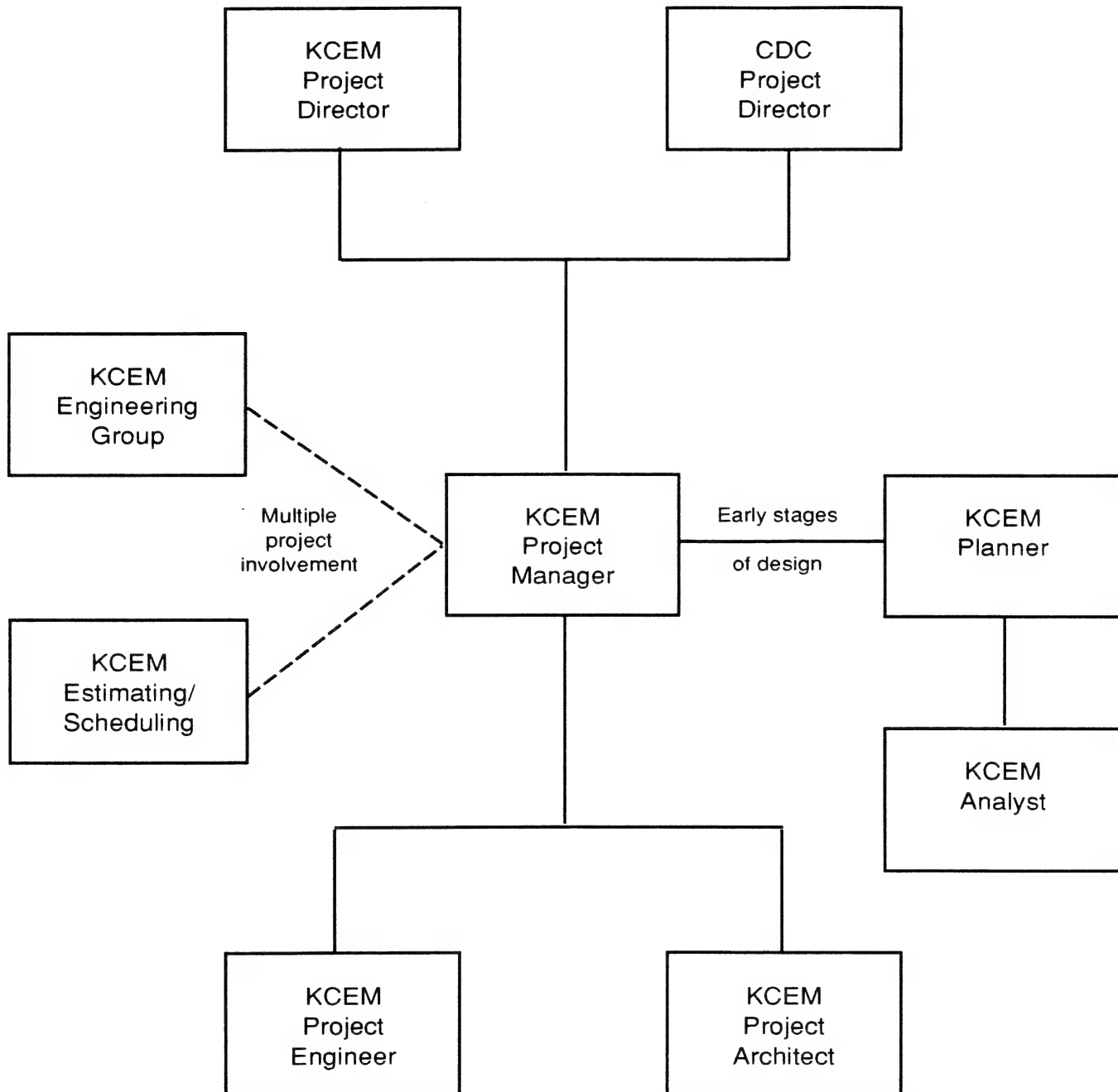
In order to measure Kitchell's overall approach, six completed or near-complete prisons were investigated. The total costs of all six prisons was about \$1 billion. All six are either fully occupied or near full occupancy. Based upon overall cost, schedule, and quality performance, Kitchell's performance during the planning, bidding, and award phases complied fully with their contract responsibilities.

**A. The Organization Structure of  
Kitchell Adequately Meets the  
Needs of Performing Program  
Management Functions**

At the direction of the CDC, Kitchell provides professional services for the management of the new prison program during planning, design, and other pre-construction activities. As Program Manager, Kitchell does not directly prepare conceptual or detailed design plans and specifications but, rather, manages and reviews plans prepared by other architect and engineering firms. After contract award, on-site management of construction contractors has been assigned by the CDC to the construction manager.

**Exhibit I-1**, following this page, shows Kitchell's organizational approach to managing the design phase of a single new prison. A Kitchell Project Director typically manages more than one prison, as there may be as many as six new prisons underway at

## Typical Organization Structure for a New Prison as Described by Kitchell CEM



one time. A Kitchell Project Manager is generally assigned one new prison during the design phase. A team of architects, engineers, planners, schedulers, and estimators provides support to the Kitchell Project Manager.

The general success of the program in recent years, as documented later in this section and in Section II, has resulted in a large part from the planning, estimating, scheduling, and management skills of Kitchell in effective support of the CDC. Kitchell's organizational structure has proved entirely suitable for its mission based upon responsibilities assigned to Kitchell.

**B. Kitchell Employees are Well  
Qualified for the Duties and  
Responsibilities Assigned**

A random sample of twenty individuals was picked from all 100 Kitchell employees in engineering disciplines who have worked 500 or more hours on CDC projects since inception of the Kitchell contract (July, 1982). We obtained personnel files for each of these individuals and reviewed each in detail. We reviewed each person's educational background, professional experience and registrations, promotional and salary history, and Kitchell performance reviews.

We then randomly selected six of these individuals from the original list of twenty. Five available employees were interviewed, plus two additional individuals to obtain input from other disciplines. Each was interviewed regarding job content, position descriptions, and organizational effectiveness. The employee mix included two executives, one project manager, two planners, one project engineer, and one estimator. Informal discussions with a number of other employees also were held.

Two of the twenty individuals randomly selected were let go by Kitchell for unsatisfactory performance, one after seven months employment and one after about two years. Both had generally worked full-time on CDC projects during their employment with Kitchell.

All of the remaining eighteen individuals appeared to be well qualified for the positions they held at Kitchell. All received "good" to "very good" performance reviews from their supervisors, with some receiving written commendations from CDC for work

on new prisons. Of the individuals interviewed, all had qualifications and work experience which met or exceeded Kitchell's assigned duties (which are approved by the CDC) for the particular classification they were being used for on CDC projects. A number had advanced in the organization to positions of greater responsibility. Finally, there appeared to be high morale among those interviewed.

C. Overall Cost Performance  
Complied Fully With  
Contract Requirements

A major goal set early in the program was to reduce the cost of beds in all facility levels. In order to evaluate the project planning and control mechanisms, and the systems established and used by Kitchell, we compared the original cost estimates of six large prisons with the actual costs of the completed facility. This comparison provides an overview of Kitchell's effectiveness as a program manager throughout the pre-construction phase.

Table 1, on the next page, is a comparison of original cost estimates with actual costs of six large prisons either completed or anticipated to be completed in the first quarter of 1989. These prisons represent 13,578 beds, or sixty-eight percent of beds anticipated to be completed by first quarter 1989.

**Table 1**  
**Major Prison Program Costs**  
**Planned vs. Actual**

Facility	Original Budget (000)	Indicated Final Cost (000)	Savings or Overrun (000)	Percent Under Over	Capacity in Beds
Amador	\$142,774	\$147,122(b)	\$ 4,348	3	1,700
Avenal	168,700	161,274(c)	(7,426)	(4)	3,034
Corcoran	272,308(a)	254,476(d)	(17,832)	(7)	2,916
Riverside	133,173	124,629(e)	(8,544)	(6)	2,000
Sacramento	162,590	154,107(f)	(8,483)	(5)	1,728
San Diego	<u>144,085</u>	<u>158,350(g)</u>	<u>14,265</u>	10	<u>2,200</u>
<b>TOTAL</b>	<b>\$1,023,630</b>	<b>\$999,958</b>	<b>(\$ 23,672)</b>	<b>(2)</b>	<b>13,578</b>

(a) Original budget includes:

\$253,669 Original Facility Estimate  
18,639 Prison Industry Authority

\$272,308 Total Original Budget

(b) Source: CDC capital outlay report 12/31/88

(c) Source: CDC capital outlay report 12/31/88

(d) Source: Estimate based upon construction manager's progress  
report 11/88 and Kitchell cost control report 2/16/88

(e) Source: CDC capital outlay report 12/31/88

(f) Source: CDC budget summary 8/10/88

(g) Source: CDC capital outlay report 12/31/88

The indicated final cost for the six new prisons is two percent less than the initial budgets prepared before detailed design and construction work began. This represents an outstanding performance for a public sector program pioneering a new conceptual approach designed to shorten design-construct schedules as well as to decrease costs.

The value engineering program developed by Kitchell and embraced by CDC personnel effectively managed costs throughout the design development and detailed design phases of each new prison. Kitchell did a very good job of value engineering. The development of cost models for typical components and housing units enabled Kitchell to

incorporate successful innovations and proven concepts into each new design to further continue overall cost reduction.

A seventh prison, in Vacaville, was not included in the table because it was an early attempt to introduce new concepts. This project may be considered to be a first effort at a new approach before development of the current modular approach and cost model basis for developing budget estimates. It also was subject to a reorganization of the Program Manager, a shift in overall management responsibilities to the CDC, and other impacts. If this project were to be included in the table, the actual cost for seven prisons would be essentially equal to the original budget, a very creditable achievement.

**D. Overall Scheduling Performance  
Is Rated Very Good**

Another major goal set early in the program by the CDC was to reduce the overall design and construction period from first fund appropriation to final completion. Goals were aimed at reducing the overall schedule of prison construction by fifty percent from the actual schedules originally experienced by the CDC on earlier projects. An equally important goal was to introduce a phased occupancy program so that portions of a prison could be occupied well in advance of final completion. These ambitious goals were achieved by Kitchell and the CDC within the new prison construction program.

Table 2, on the next page, compares the actual completion date with the planned completion date developed at the time the original cost estimate was prepared for each of the six new prisons.

**Table 2**  
**Major Prison Program Schedules**  
**Planned vs. Actual**

Facility	Actual Start	Completion Planned	Dates Actual	Construction Schedule (Months)		Months Late (Early)	Percent Diff.
				Planned	Actual		
Amador	12/85	9/87	9/87	21	21	0	0
Avenal	12/85	12/87	10/87	24	22	(2)	(8)
Corcoran	8/86	12/88	2/89	28	30	2	7
Riverside	5/87(a)	9/88	3/89	16	22	6	38
Sacramento	10/84	2/87	4/87(b)	28	30	2	7
San Diego	<u>11/85</u>	<u>4/87</u>	<u>9/87</u>	<u>17</u>	<u>22</u>	<u>5</u>	<u>29</u>
<b>TOTAL</b>				<b>134</b>	<b>147</b>	<b>13</b>	<b>10</b>
<b>AVERAGE DURATION</b>				<b>22.3</b>	<b>24.5(c)</b>	<b>2.2</b>	<b>10</b>

(a) There was a two-month delay from ground breaking until actual start (reported by Kitchell). Construction difficulties also contributed to delay.

(b) Actual completion ready for building occupancy was assumed on 4/87, per 1987 plan. Security system problems and final work continued until 9/87. We used 4/87 as beneficial and actual occupancy, or 30 months to complete.

(c) See Exhibit A-1 in Appendix A for a comparison with other states.

For the six facilities reviewed, the average schedule delay was 2.2 months, or ten percent of the originally scheduled construction duration. This is a substantial achievement because each new prison's original schedule already represented an improvement of over fifty percent when compared to the traditional sequential approach previously utilized of the CDC.

Much of the schedule improvement can be credited to innovative methods introduced by Kitchell and to the overlapping of design and construction work, usually called "fast-track" or phased construction. A major innovation which compressed schedules included multiple architectural design packages for different housing units and for support facilities, where appropriate.

Overall schedule performance is rated very good when compared to other public and private sector projects.

E. **CDC Operational Personnel Are Satisfied with the Overall Quality of the New Prisons**

Overall quality and performance is dependent upon the performance of Kitchell, the construction managers, and the CDC. Comments set forth in this section are the result of interviews with representatives of each of these three parties.

Project management theory teaches that cost-schedule-quality considerations are tradeoffs with overall results dependent upon the emphasis which the owner (i.e., the CDC) places on each of the individual goals. For the new prison program we found that the "fast-track" approach and the proactive management program established to design within the project budget (value engineering) were major goals adopted by all members of the project team (Kitchell and CDC). The need for security for correctional officers, inmate protection, and inmate confinement also were major goals monitored by the CDC.

Within this framework a number of innovative concepts, designs, and practices were developed. In such a climate of innovation, certain problems of interfacing with firms participating in the program can be expected and a number were in fact experienced. However, overall results of the final product were received positively by CDC operations and maintenance personnel. Current plans for new prisons include efforts to reduce the number of design and construction packages at the site, which should minimize the potential for interface problems. Some delay in implementing the Post Occupancy Evaluation Program<sup>1/</sup> was noted, however.

Correctional requirements were given top priority in all instances investigated. However, all team members were willing to innovate and to try new approaches to improve the occupancy schedule and to minimize overall costs. Such an approach will produce a higher level of initial operating problems. However, on balance it appears that CDC operational personnel are satisfied with the overall quality of the new prisons.

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<sup>1/</sup> A formal program to evaluate, in detail, new facilities after they became operational. Results of the studies help to provide for improvements in the design of new prisons to be built later in the program.



## F. Conclusions

Kitchell CEM's overall approach as program manager, as evidenced by schedule, cost and quality performance on over \$1 billion worth of completed projects, represents a high degree of competency in Kitchell's assigned pre-construction responsibilities.

The Kitchell organization, as well as CDC's own internal organization, has continued to improve through the six years of the contract. Summary reports such as the Monthly Cost Control Reports and Monthly Schedule Report for the Phase III Construction Program<sup>2/</sup> represent a much needed budget and schedule overview. These reports should enable top management of both the Program Manager and the CDC to be adequately informed with all projects in the design and construction phases.

However, because of the current organization structure used by CDC (i.e., program management separate from construction management), Kitchell is not given the responsibility of keeping cost control and schedule reports up-to-date during construction and through occupancy. It was quite difficult for this audit team to determine final estimated costs of some of the prisons consistent with different infrequently issued reports.

## G. Recommendations

1. Present efforts to reduce the number of design and construction packages at the site consistent with schedule requirements should continue in order to minimize interface problems.
2. Kitchell should be requested to analyze and review each contract change order and schedule change during construction in order to provide prompt feed-back for future projects and to enable a critique of initial planning concepts.<sup>3/</sup>
3. Kitchell should be requested to produce Monthly Cost Control and Monthly Schedule reports throughout the construction phase on all projects for which the firm performed initial planning. Currently these reports are issued only upon CDC requests after the last bid package has been awarded. (See Chapter IV for details regarding this

<sup>2/</sup> The Phase III construction program consists of six new prisons; two in Los Angeles County (LAI and LAII), two in Kern County (Delano and Wasco), one in Imperial County, and one in Madera County.

<sup>3/</sup> A new program involving the review of change orders and schedule changes is being developed with the Phase III Construction Program.

recommendation.) Both reports could be combined into a single report at a slightly higher summary level for management.

## II.

### **KITCHELL CEM'S PERFORMANCE OF ITS CONTRACT RESPONSIBILITIES IS ACCEPTABLE**

A representative new prison was reviewed to assess the professional performance of Kitchell CEM. Performance was reviewed considering the contract scope of services set forth in the agreement between Kitchell and the Department of Corrections and subsequent amendments. In assisting the state "with the management of the new prison capital outlay program," Kitchell provides professional services in several areas related to the management of large projects. Kitchell's performance in these areas was compared to acceptable professional practices generally found in the industry for project management service contracts.

Our performance audit concludes that Kitchell CEM is performing its contract responsibilities in an acceptable manner. The firm has provided worthwhile assistance to the state in achieving the cost, time, and quality goals for the new prison construction program.

#### **A. Project Selection and Description**

To test the performance of contract responsibilities by Kitchell, one new prison was selected as a sample to be representative of Kitchell services. The firm has been involved in twenty-two specific projects to date under the terms of the Agreement. Criteria for selecting a sample prison included:

- A major new prison project
- Recently completed or nearing completion
- Kitchell involvement throughout the project
- Incorporation of cost control procedures implemented in 1984.

The sample project would reflect evolution of the program since the earlier new prisons, and would represent current implementation strategies.

The new prison in Kings County at Corcoran was selected based on these criteria. Work on the Corcoran prison, which is nearing completion, has been in progress during the last three years of the six total years of the CDC/Kitchell Agreement. The project utilized the prototypical "270" degree housing units for medium security prisons,<sup>4/</sup> previously developed under the new prison program. Corcoran also was the first prison in which the CDC used a prototypical approach to the support buildings as well.

The Corcoran project was added to the Kitchell-CEM contract scope by Amendment #10 dated September 26, 1985. The project was exempted from the California Environmental Act, but required preparation of an environmental assessment study. The project first appeared in the amended CDC Five-Year Plan of 1985-1990 published in February 1986. The published project goal was first occupancy in fiscal year 1986/87 and completion in fiscal year 1988/89.

The proposed budget was \$253.7 million. This budgeted amount was later increased to \$272.3 million, to include \$18.6 million for Prison Industry Authority facilities and equipment. The PIA budget originally was appropriated separately.

The designed bed capacity of Corcoran is shown in Table 3, below:

**Table 3**  
**Design Bed Capacity - Corcoran**

Facility	Level of Security	Number of Beds	Occupancy Date
IIIA	Medium	500	February, 1988
IIIB	Medium	500	March, 1988
IIIC	Medium	500	May, 1988
IVA	Security Housing Unit	512	December, 1988
IVB	Security Housing Unit	512	January, 1989
I	Minimum	<u>392</u>	May, 1988
	TOTAL	2,916	

<sup>4/</sup> Indicates the degrees of unobstructed view of housing unit from the control room.

A more complete description of the facility is included as **Exhibit B-1**, in Appendix B. A chronology of Kitchell activities and decision points related to the Corcoran facility is included as **Exhibit C-1**, in Appendix C.

Kitchell assigned a project manager to the project in early 1986, generally coinciding with the submittal of the Project Planning Guide to the Public Works Board. Design consultants started work in early March 1986. The project manager has served in the same job capacity throughout the project from the start of design through the present stages of construction. During this same period, there were changes in the CDC project director and fiscal analyst positions, and a change in construction management firms at the site.

The review of the Corcoran facility involved interviews with the following key members of the project team:

- Kitchell project team
- CDC Project Director at Corcoran
- CDC facility operators at Corcoran
- Project Manager for Construction Manager at Corcoran
- Principal and Project Manager for A/E firm at Corcoran.

In addition, we reviewed project documents and completed a comprehensive on-site tour of recently completed and operational facilities.

#### B. Contract Scope of Services

The general scope of services under the contract has remained unchanged since the first amendment to the Agreement dated June 1, 1983. The general scope statement calls for Kitchell to "assist the State with the management of the new prison program." The scope of services identified in the contract and modified by the first amendment is summarized in **Exhibit D-1** of Appendix D to this report.

Kitchell, operating under direction from the CDC, is principally involved in the pre-construction phases of the project. Following the award of the last bid package, the Kitchell team's responsibility is limited to special requests for service from the CDC

Project Director. Through June, 1988, Kitchell has billed the CDC a total of \$2.1 million in fees for work on the Corcoran prison.

On the Corcoran prison, Kitchell was most significantly involved in the planning, design, and bid phases of the project. After the last bid package was awarded to the last construction contractor, Kitchell's role was significantly reduced. However, unlike some of the other new prisons, Kitchell has remained involved in the project with the concurrence of the CDC Project Director. As a result, Kitchell has contributed to solutions of field problems and kept abreast of field change orders. Also, Kitchell initiated a Post Occupancy Evaluation by the operators for further development of the "prototypical" designs and correction of significant operational deficiencies in the recently completed facility.

The following paragraphs comment on several specific areas of the management, design, and construction of the Corcoran facility which involved Kitchell personnel.

C. Kitchell's Cost Estimating Activities  
Were of Professional Quality and in  
Conformance with Performance  
Objectives

The original cost model prepared by Kitchell was used as the basis for the overall appropriation of funds for Corcoran. The cost model was a conceptual type estimate developed from Kitchell's database. This database contains information gathered on the CDC program and other prison construction projects where Kitchell has knowledge.

The cost model was developed first on a facility basis, then was broken down by the Kitchell project team into budget criteria for controlling the cost of the job. This control budget was itemized according to an established design and bid strategy, and includes consultant fees and other project costs and contingencies.

The Kitchell estimating effort remained on this budgetary level throughout the project. Architect and engineering firms under contract for the design of the facility had the responsibility for preparing detailed engineer's estimates of their design packages at various submittal points. Kitchell estimators reviewed these detailed estimates submitted by the A/Es to assure that the design of each package was within the budget criteria.

The cost estimate, as reviewed by Kitchell, became the state's estimate for bid comparison. For Corcoran, the state's cost estimates averaged eight percent over the low bid. Cost estimates for individual bid packages ranged between eighteen percent under to sixty-five percent over the low bids. Only four of fifteen bids tabulated were within ten percent of the low bid for the respective package. Variation with bid estimates is normal however, we found the range of variation at Corcoran to be high. However, we did not find that this was a significant problem.

Kitchell also prepared detailed cost estimates of the design effort which was used as a basis for negotiation with the selected architects and engineers. These estimates were based on the expected design effort including drawings, specifications, studies, construction support, and administration costs.

Kitchell's cost estimating activities were found to be of professional quality and in conformance with the CDC's performance objectives. The CDC performance objectives include the following:

- Provide beds as quickly as possible
- Ensure safety of staff, inmates and visitors, in part, through the design of buildings
- Meet basic inmate and special population needs, such as, recreational opportunities and handicap access
- Foster positive approaches to manageability, in part, through the design of buildings
- Plan, build, and operate prisons to keep initial and life-cycle costs as low as possible while meeting legal mandates, codes, and the other performance objectives
- Standardize the system to facilitate control of the design and budget and to ensure the consistency and quality of new prisons.

**D. Kitchell's Scheduling of Bid Packages Was Adequate**

For the Corcoran facility, twenty-four design packages were consolidated into eighteen construction contract packages. This large number of design packages was the

result of a strategy to compress the time schedule and to minimize the design phase by maximizing the design resources. In addition, the planning involved a decision to apply a "best building" approach to selecting building designs and permission to use design firms under contract with the CDC. Contracts with A/E firms with successful building designs at other facilities were amended to adapt the designs to Corcoran. This became the start of the prototypical approach to buildings other than the 270-housing units and maximum security housing units. Buildings which were not repeated also were awarded to A/E firms currently under the contract with the CDC to minimize the design phase of the schedule.

Kitchell employees participating as part of the Corcoran project team assisted in establishing the overall project schedule, identifying intermediate design milestones for design packages, and setting the construction milestones with liquidated damage criteria. The Kitchell team monitored the progress of design using intermediate design milestone dates established as part of the A/E contracts. Compliance with the schedules was assured through frequent coordination meetings, over-the-shoulder reviews at the A/E office, and design reviews. Also, Kitchell adhered to an internal procedure for design reviews which set a two-week turnaround time for inhouse review of A/E submittals.

The scheduling of design and bid packages was found to be adequate for the control of the pre-construction activities and innovative for conformance with the CDC's performance objectives.

E. Kitchell's Design Reviews Were of Professional Quality

Design reviews were performed in accordance with Design Review Procedures for CDC Projects, which were developed by Kitchell. The objectives of the design review were to assure that the:

- Design reflects the CDC correctional program for Corcoran
- Project is within budget
- Materials and designs are cost effective
- Project is on schedule



- Designs comply with applicable standards
- Designs comply with codes and other regulations
- Exposure to claims is limited.

Responsibility for the integrity of the design remained with the respective architect/engineering firms.

The A/E firm submits design packages to the CDC consisting of drawings and specifications. The Kitchell team distributed these packages to all of the state agencies and departments who participated in the review. Kitchell also was responsible for collecting and consolidating the comments from the various review groups, including the Kitchell engineering section. The Kitchell project manager transmitted the comments to the A/E and conducted a design review meeting where all the comments were discussed.

Examples of these design comments from the reviews at Corcoran were extensive, despite the relatively short timeframe for each review. The A/E firm we interviewed found the comments helpful in understanding the goals of the CDC, and as an independent check on work which could avoid problems later in the field.

By nature of the Kitchell contract, the Kitchell effort was focused on the quality and integrity of the design. Value engineering alternatives were explored as a result of the comments and meeting discussions. Comment packages prepared by Kitchell for transmittal back to the A/Es highlighted design questions which had significant impacts on costs. Consideration of the intended function of a facility, and aggressive attention to the estimated cost of the design packages, resulted in overall cost savings in construction of Corcoran.

Although Kitchell is not contractually responsible for the constructability review, it is a natural part of the general review of design and is based on the field experience of the team. Although the construction manager was on-site with the first construction contractor, the CM performed a constructability review as a courtesy. It was understood that this review was not within the scope of the original CM contract. Kitchell has since been active in requesting that constructability reviews be made a part of the CM contracts, and that the firms be brought on earlier in the design process to provide a constructability emphasis in the design review process.

We found that Kitchell's activities related to reviewing drawings and specifications were of professional quality and in conformance with the CDC's performance objectives.

**F. Kitchell's Quality Assurance in Design  
was Professional and in Conformance  
with CDC's Performance Objectives**

The architects/engineers were responsible by contract for the overall quality of the design. Kitchell's contract requires establishment of formal guidelines and standards applied to the architects/engineers and assistance in overseeing the A/E's activities. Quality assurance in the design of Corcoran was a result of the design review process which occurred at several points during the design of each package. The process was set forth in the written procedure, Design Review Procedure for CDC Projects. This procedure designates the Kitchell project manager as having the primary responsibility for the design review and coordinating the technical expertise. The project manager works with the CDC quality assurance unit which sees that CDC's needs are met. A design review team is established which includes various Kitchell groups and CDC units. Each participant of the team is assigned specific responsibilities. Kitchell followed this procedure throughout the design of the Corcoran facility.

During construction, Kitchell, the CDC, and the CM found deficiencies in A/E drawings. Because of this, the Kitchell engineering section now performs a separate drawing "ready check" aimed at assessing the overall quality of the coordination among the various design disciplines and sub-consultants.

Because Kitchell set the design package strategy for the Corcoran facility, we assumed that Kitchell had the responsibility for coordinating the interfaces among the various design packages. Because of the large number of packages and design firms, a significant potential for interface problems existed. The project team conducted separate coordination meetings among various design firms and sub-consultants to minimize these problems. Some problems encountered at Corcoran which may have been related to the interfacing designs included mismatch of operating pressures in the hot water system, electrical control console conflicts, and deficiencies in the telecommunications systems. The CDC operators also complained of the lack of sole contract responsibility for several of the plant-wide systems which were designed and constructed under various packages.

With the exception of the control console redesign, the problems did not impact the overall project goals and were few relative to the large number of other interfaces. Kitchell has taken this into consideration in developing the design package strategy for the new facilities by reducing the number of A/E firms contracted for one facility.

Another area of quality concern to the CDC facility operators in which Kitchell played a role was the design and construction of the boiler plant and cogeneration energy facility. The facility is not yet operating satisfactorily and is perceived by the operators to have an insufficient amount of instrumentation and inappropriate equipment. On-line switching also was alleged to be a problem for efficient operation.

Kitchell's activities related to quality assurance in design was professional and in conformance with the CDC's performance objectives.

G. Kitchell's Job Cost Accounting and Control  
Activities were Professional and in Conformance  
with Performance Objectives. However, it is  
Difficult to Determine Actual Costs of a New  
Prison due to the Current CDC New Prison  
Program Organization

Kitchell's work related to job accounting and cost control started with preparation and distribution of the Program and Cost Model. This distribution was reflected in the Project Cost Report #1 issued on June 9, 1986, approximately four months after the start of design. The project cost control report was detailed by design bid package and presented a forecast of estimated costs at completion.

The results of the cost forecast are shown on the decision chronology, **Exhibit C-1**, in Appendix C. The project cost report compared the current estimate to both the original budget and to the previous report estimates. Each change to the original cost estimate is tabulated and attached to the report for a comprehensive history of the cost development of the project.

At Corcoran, Kitchell also tracked (and is still tracking) project change orders which are generated in the field by the construction manager. Kitchell uses the information to assess the type of construction changes made and to correct prototypical designs, if applicable.

The activities related to job accounting and cost control were found to be of professional quality and in conformance with the performance objectives. It should be noted that the last Kitchell project cost report for Corcoran was issued in March of 1988 (in conformance with Kitchell's contract responsibilities) and is, therefore, not current with the past nine months of activity at the jobsite. As a result, it was difficult to determine what the current forecasted cost at completion is without reconciliation of several other reports prepared by the CDC and the construction manager. Kitchell was not responsible for preparing cost reports after the last bid package was awarded.

H. Kitchell's A/E Invoicing and Payment Controls were Adequate, Although a More Quantitative Evaluation of A/E Performance is Needed

The Kitchell project manager was responsible for authorizing the amount of the A/E invoices. The A/E fees were allocated to design milestones, such as completion of design development, 75 percent completion of construction documents submittal, 100 percent completion of construction documents, and completion of construction support. The A/E submitted invoices based on a percentage of the fee related to each milestone.

The project team used a relatively subjective method to evaluate the actual progress of the firms. The evaluating team member estimated how the firm was progressing based on the completion of submittals, over-the-shoulder review of work in progress, and work assessment in design review meetings. The invoice, with Kitchell's assessment of the project, was forwarded to the state for payment. This procedure is similar to procedures generally used in monitoring performance of design firms.

We found that Kitchell's activities related to reviewing the design were professional and in conformance with the CDC's performance objectives. One weakness in the system is the reliance on the subjective method to evaluate the progress of the designer. In some instances a more quantitative progress monitoring system could easily be developed

based on detailed information developed in negotiations of the original fees. A quantitative system could be based on the progress of individual design activities, such as engineering studies, calculations, drafting and checking of drawings, estimating, and specifications. A quantitative system could be used to verify the actual work performed, allow independent assessment of the work, and provide a tool for monitoring performance against a baseline agreed upon with the A/E firm.

I. Kitchell's Project Cost and Schedule Reporting was Professional, Although Cost Control Reports, with Concurrence of the CDC, were not Produced Monthly.

The Kitchell project team produced sixteen project cost control reports over the life of the design phase of the Corcoran facility until the last construction contract was awarded. These reports were not submitted monthly as required by the contract but were prepared generally at the request of the CDC Project Director or as other project priorities would permit.

Kitchell maintained a detailed network schedule for the new prison which consisted of approximately 1,000 activities. The computerized network was related primarily to pre-construction activities, such as schematic and design development, submittals to the Public Works Board, construction documents, design reviews, bid, and award. A construction activity was carried for each building within the various design packages. This network schedule for Corcoran was updated several times during the course of the project. The last revision, Revision 13 dated February 25, 1988, was issued one month later and reflected changes occurring in the past month. The schedule also was not issued on a monthly basis as required by Kitchell's contract.

Kitchell's activities related to project cost and schedule reporting were found to be of professional quality and in conformance with the performance objectives. Although the cost and schedule reports were not issued on a routine basis as required by the contract. The CDC directed Kitchell in 1988 to produce cost and schedule reports on a monthly basis for all of the projects now under design.

## J. Conclusions

Using performance on the 2,916 bed Corcoran facility to base a conclusion on the overall performance of contractual responsibilities, we found Kitchell to be in full accordance with the intent of the contract with the CDC. The firm was an integral and innovative member of the state's management system for the new prison program. Continuity throughout the project has been provided by the Kitchell project team.

While there were some deficiencies noted, the overall goal of final occupancy in fiscal year 1988/89 will be achieved in January 1989. Additionally, the final cost of the facility will be significantly under the original budget of \$272.3 million. The overall duration of thirty-six months from the start of design to final completion is an impressive achievement for a prison of this size. This observation is substantiated when compared to the experience in other states, which is summarized in Exhibit A-1 in Appendix A.

The CDC facility operators considered Corcoran to be the best prison from a facilities maintenance perspective, when the current list of deficiencies are corrected. CDC security personnel also stated that the prison will be the most secure prison in their experience

From interpreting the contract, routine publishing of Monthly Status and Progress Reports was the only responsibility Kitchell did not perform. However, the CDC directed Kitchell to cease preparation of the monthly report so that Kitchell could work on other priorities. In early 1988, monthly status reporting was started for the newer Phase III projects (six new prisons) now under design. No detrimental effects resulting from not producing the monthly status reporting were found.

## K. Recommendations

The following recommendations are made based on the findings and conclusions related to the study of Kitchell's performance of its contract responsibilities.

1. **Design Monitoring** - Kitchell should use the detailed information available from the original design negotiations to monitor the progress of some A/E firms. The program manager should develop a

performance measurement system based on the completion of certain specified tasks and in accordance with an agreed upon schedule with the A/E firm.

Kitchell project managers currently monitor the progress of design according to a qualitative evaluation of the designer's work. For smaller design packages, taking less time, this approach may be sufficient. However, on longer duration designs the progress is more difficult to assess without quantitative information. Detailed cost estimates are required from the architect/engineers and are prepared by the Kitchell project managers to assist in the negotiation of the original A/E design fees.

Benefits of implementing a quantitative system would provide a common approach to the measurement of design progress which can be verified without substantial knowledge of the project. The subjective evaluation would be a check of the quantitative result.

2. **Design-Construct Contracts on Fast-Track Projects** - The CDC should not competitively bid contracts for both design and construction of projects based on conceptual performance standards for fast-track applications. Rather, the CDC should continue the practice of negotiating with the most qualified firm for design work, and then competitively bid construction from the completed design. This recommended method is the approach CDC most often uses for its new prison program.

Corcoran has experienced delays in getting the cogeneration facility into reliable operation. Concern was expressed by the CDC operations that the energy facility will not operate as intended. There also is some disagreement that the equipment and instrumentation provided is adequate for reliable operation. The fact that the energy facility was competitively bid for design and construction, using a performance specification may have contributed to the problems experienced.

**III.**

**THE MULTIPLIER OF DIRECT SALARIES  
NEGOTIATED WITH KITCHELL IS HIGH,  
ALTHOUGH KITCHELL'S COMPENSATION RATES  
ARE LOWER THAN RATES THE FIRM CHARGES  
OTHER GOVERNMENT CLIENTS**

The Office of the Auditor General's January 1987 report, *A Review of the Department of Corrections' Program Management and Construction Management Contracts*, concluded that the Department of Corrections was not fully prepared in negotiating contract rates with Kitchell CEM. Consequently, the OAG concluded that the CDC agreed to compensation rates that were higher than justified, based on the cost to Kitchell of providing services.

Our audit of the CDC's Program Manager Contractor, found the following:

- Compensation rates which the CDC negotiated with Kitchell are actually lower than the rates Kitchell charges its California local government correctional clients
- Eighty percent of Kitchell employees who charge time to both CDC projects and non-CDC projects are billed at lower rates on CDC projects than non-CDC projects
- The CDC has negotiated a billing rate multiplier with Kitchell that is higher than the average multiplier which the California Department of Transportation has negotiated on all of its current engineering consulting contracts
- Kitchell has billed the CDC for overtime hours worked by exempt salaried employees who are not compensated for such overtime. This practice is allowed by the CDC but is not allowed by the federal government, Caltrans, or other states contacted during this audit.



**A. The Compensation Rates Kitchell Negotiated With the CDC Are Less Than the Compensation Rates Kitchell Negotiated With Its Other California Local Government Correctional Clients**

The Sacramento branch of Kitchell CEM employs approximately fifty people. Some of the Kitchell personnel work on non-CDC projects, including work for four California local government clients to design and build new jails. However, the majority of the hours charged by Sacramento-based Kitchell personnel are charged to CDC projects.

A comparison was made of Kitchell compensation rates negotiated with CDC and compensation rates negotiated by Kitchell with California local governments. Only personnel disciplines which had very similar responsibilities were compared. The five Kitchell disciplines chosen for comparison represent 79 percent of the engineering hours billed on CDC projects over the last three full fiscal years. We determined the similar disciplines by discussing the responsibilities of each local government project discipline class with Kitchell management. The disciplines excluded from our comparison are unique to the CDC prison construction program due to its multi-project nature and large size.

The comparison shows the rates Kitchell has negotiated with the CDC are lower than the rates Kitchell has negotiated with all its other active California local government clients. Table 4, on the next page, presents a list of personnel disciplines and rates in CDC's contract with disciplines applicable to Kitchell's other government projects.

**Table 4**

**Comparison of Compensation Rates Charged by Kitchell CEM on CDC Prison  
Projects and on Four California Local Government Jail Projects<sup>(a)</sup>  
Fiscal Year 1988/89 Rates**

Discipline	CDC Rate	Local Government Project 1 Rate	Local Government Project 2 Rate	Local Government Project 3 Rate	Local Government Project 4 Rate
Project Manager	\$87	\$ 90	\$134	\$ 90	\$110
Project Engineer	57	57	67	85	100
Planning Director	99	124	NA	NA	NA
Planner	59	130	75	76	NA
Design Review	71	91	86	100	100

(a) These are the only California local government correctional clients for which Kitchell is currently working and actually invoicing.

Of the sixteen actual compensation rates compared, fifteen of the rates Kitchell negotiated with, and actually charged to its local government projects were higher than CDC rates; one rate was the same. The Planner for Local Government Project 1 and the Project Manager for Local Government Project 2 currently charge rates significantly higher than the rates Kitchell has contracted for with the CDC. According to Kitchell, the primary reason is the Planner and Project manager for these local government projects have responsibilities above and beyond the norm for their respective position; therefore, these two positions charge a higher than normal hourly rate.

**B. Kitchell Employees Who Work on Both CDC and  
Other California Local Government Projects Were  
Billed at a Lower Rate on the CDC Projects Than  
They Were Billed On the Local Government  
Correctional Projects**

We identified ten Kitchell employees who worked during fiscal year 1988/89 on both CDC projects and California local government projects. An examination of billings for these ten individuals allows a direct comparison of the compensation rates charged to the CDC as compared to the rates Kitchell charges other government correctional clients.

Eight of the ten Kitchell employees were invoiced to the CDC at rates lower than they were invoiced to California local government correctional projects. One of the two employees who charged at a rate higher on CDC projects than on local government projects did so only after being promoted to a higher position during the year we examined. The other employee who charged at a rate higher on CDC projects did so because the particular local government project he worked on invoices according to the type of work being performed as opposed to the discipline of the employee performing the work. Therefore, while this employee's position and responsibility demanded one rate on CDC projects, when that same person performed a less difficult task for the local government client, that person was billed at a lower rate.

The rates charged to the CDC and to California local government Projects 1, 2, and 3 for these employees are presented in **Exhibit III-1**, following this page.

C. **The CDC has Negotiated a Multiplier with Kitchell That is Higher than the Average Multiplier which the California Department of Transportation (Caltrans) Has Negotiated on All of Its Current Engineering Consulting Contracts**

A critical item in reaching agreement on a time and materials contract is negotiating the multiplier used to calculate billing rates. The multiplier used on the Kitchell contract consists of three components:

- A factor for payroll taxes, insurance, sick leave, vacation pay, and other fringe benefits
- A factor for overhead costs, e.g., office rent
- A factor for profit.

**COMPARISON OF ACTUAL COMPENSATION RATES WHICH KITCHELL EMPLOYEES  
CHARGED ON CDC AND CALIFORNIA LOCAL GOVERNMENT CORRECTIONAL PROJECTS**

EMPLOYEE	CDC		CALIFORNIA LOCAL GOVERNMENT PROJECT 1		CALIFORNIA LOCAL GOVERNMENT PROJECT 2		CALIFORNIA LOCAL GOVERNMENT PROJECT 3	
	RATE	DISCIPLINE	RATE	DISCIPLINE	RATE	DISCIPLINE	RATE	DISCIPLINE
1	\$87	Project Manager	\$113	Construction Manager	NA	NA	NA	NA
2	\$87	Project Manager	\$91	Design Review	NA	NA	NA	NA
3	\$57	Project Engineer	\$57	Project Engineer	\$67	Project Engineer	NA	NA
4	\$59	Planning	\$76	Planning	\$75	Planning	NA	NA
5	\$41	Analysis	\$35	Clerical	\$40	Clerical	NA	NA
6	\$71	Design Review	NA	NA	NA	NAS	\$100	Design Review
7	\$71	Design Review	NA	NA	NA	NA	\$100	Design Review
8	\$71	Design Review	NA	NA	NA	NA	\$100	Design Review
9	\$50	PIA Engineerg	NA	NA	NA	NA	\$72	Project Scheduler
10	\$84	Estimating/ Scheduling	NA	NA	NA	NA	\$35	Office Administration

After the multiplier is determined, the hourly billing rate of an individual personnel classification is calculated by multiplying the average direct hourly salary cost for the classification by the negotiated multiplier. As an example, presented below is the multiplier negotiated with Kitchell for fiscal year 1988/89:

- Benefit factor: 42% of direct salaries
- Overhead: 96% of direct salaries and benefits
- Profit: 12% of direct salaries, benefits, and overhead
- Multiplier: 3.12 (1.42 x 1.96 x 1.12)

The two other California State departments which contract with a significant number of engineers are Caltrans and the Department of Water Resources. We contacted both to obtain information on such contracts. The Department of Water Resources contracts primarily for on-site engineering work (e.g., pump diagnostic testing) and not for in-office engineering-related projects. Also, DWR does not generally contract with engineering firms on a cost-plus basis (as does Caltrans and the CDC). Instead, DWR contracts usually are based on a total loaded hourly rate, by individual, and a total number of hours. Therefore, DWR engineering contracts are not comparable to CDC engineering contracts.

Every engineering contract at Caltrans is based on a negotiated agreement. Prior to negotiation, Caltrans reviews the qualifications and experience submitted by each firm that responded to a Request for Qualifications. The three to five top qualified firms are interviewed, and Caltrans selects the top qualified firm. Negotiations then begin with this firm. If an agreement is not reached with the top qualified firm, Caltrans will select the next firm ranked and begin negotiations.

Caltrans negotiates with the qualified engineering firm for each of the following:

- Scope of work
- Hours by classification
- Costs.

Like many other state governments, negotiations of costs are based upon federal cost principles to determine allowable costs for fringe benefits, overhead, and profit.

We obtained from Caltrans a listing of all engineers currently under contract with Caltrans. We also obtained detailed cost information for each of the forty-seven contracts Caltrans currently has executed with these engineering firms. Twenty-three of these contracts are for work done in the office (home office), such as review of plans, specifications, and estimates. The remaining twenty-four contracts are for on-site engineering work.

For each of the twenty-three engineering contracts for home office work, we obtained from Caltrans the following information:

- Direct salaries
- Fringe benefit costs
- Overhead costs<sup>5/</sup>
- Profit
- Total contract costs not including direct or out-of-pocket expenditures (the sum of the previous four items).

A summary of each of the twenty-three contracts, showing total contract costs and the effective multiplier, is presented in **Exhibit III-2**, following this page. The multiplier ranges from 2.09 of direct salaries to 3.28. The weighted average multiplier for Caltrans contracts is 2.70. Although not presented in this summary exhibit, the allowed average profit percentage of the twenty-three engineering contracts was twelve percent.

By comparison, the multiplier negotiated by CDC and Kitchell for fiscal year 1988/89 is 3.12, or sixteen percent higher than the Caltrans' weighted average of 2.70. The profit percentage negotiated with Kitchell is twelve percent for fiscal year 1988/89.

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<sup>5/</sup> We found in a review of the Caltrans engineering contracts that the types of cost included in overhead vary significantly among contracts. This can be expected because Caltrans does not dictate to firms the types of costs they should include in overhead. There did not appear to be a direct relationship between the types of costs included in overhead (e.g., equipment cost or EDP expenses) and the magnitude of the multiplier.

**A SUMMARY OF MULTIPLIERS NEGOTIATED  
BY CALTRANS ON ALL CURRENT  
ENGINEERING CONTRACTS**

FIRM NO.	TYPE OF WORK	TOTAL CONTRACT AMOUNT (a)	MULTIPLIER (b)
1.	Highway PS & E	\$575,513	2.64
2.	Highway PS & E	121,095	2.93
3.	Hydraulic Study	101,197	3.09
4.	Landscape PS&E	92,795	2.48
5.	Landscape PS&E	81,397	2.61
6.	Preliminary Engineering	534,160	3.28
7.	PS & E	467,863	2.77
8.	PS & E	82,515	3.05
9.	PS & E	149,532	2.94
10.	PS & E	201,214	2.90
11.	PS & E	271,253	2.95
12.	PS & E and Right-of-Way	110,831	2.41
13.	PS & E-Proj. Rpt. & Envir.	204,592	2.78
14.	PS & E-Highway	219,639	2.35
15.	PS & E-Highway & Structure	93,741	3.02
16.	PS & E-Highway & Structure	133,946	2.62
17.	Research Fac./PS & E	386,172	2.62
18.	Traffic Studies	326,450	2.87
19.	Highways - PS & E	376,730	2.72
20.	Highways - PS & E	401,600	2.86
21.	Highways - PS & E	1,621,234	2.62
22.	PS & E-Proj. Rpt. and Envir.	471,257	2.67
23.	Highways - PS & E	334,928	2.09
	Total All Contracts (Weighted by Size of Contract)	\$7,359,654	2.70
	Median	\$219,639	2.77

(a) Not including direct or out-of-pocket expenses.

(b) The multiplier is calculated as follows:

Total contract amount excluding direct or out-of-pocket expenses ÷ direct salary costs.

The direct salary costs do not include fringe benefit costs.

Also, the multiplier negotiated by the CDC and Kitchell is applied to the average direct salary of the Kitchell employees classified within the same discipline (e.g., Project Engineer), not to the actual direct salary of each person working on CDC projects. From this average direct salary for a group of employees who may work on CDC projects, the negotiated billing rate for that classification for the contract year is determined.

Therefore, the actual multiplier (i.e., total fees billed divided by actual direct salaries of the employees being billed) will be different, depending on the mix of employees working and being billed to the CDC. If, instead, the multiplier was applied to the actual direct salary of each person working on CDC projects, the CDC would only pay for the actual cost of that employee.

In order to perform a more rigorous comparison of one firm's multiplier to another firm's multiplier, we would have to identify firms that would likely spend the same amount of time on similar tasks and that pay comparable salaries to their employees. Firms with relatively higher multipliers may have a higher overhead percentage because, with a relatively more efficient technical staff, overhead costs are allocated over fewer hours. The actual amount paid to the firm with a higher multiplier may be no more than would be paid another firm who might use more hours to complete a similar task.

**D. Kitchell Has Billed the CDC for Overtime Hours Worked by Exempt Salaried Employees Who Are Not Compensated for Such Overtime, a Practice Allowed by the CDC**

Kitchell is allowed to bill the CDC for overtime hours worked by exempt Kitchell employees, at a reduced hourly rate. Exempt employees are salaried and are not paid for overtime, and there is no direct cost to Kitchell for these overtime hours. Kitchell, therefore, receives an additional payment from CDC (which effectively goes directly to profit). This practice is inconsistent with normal practices in other states and by the federal government on similar programs.

New contracts for construction managers and the program manager should prohibit this practice. Existing contracts should be renegotiated to minimize or eliminate the practice where possible.



1. Current and Past CDC Practices  
Allows Payment of Overtime Not Paid

The CDC contract with Kitchell requires the Department to pay for overtime work billed by Kitchell, but does not require Kitchell to actually pay its employees for the overtime worked. Although the CDC has attempted to reduce the actual dollar amounts paid for overtime, the current contract language still requires payment by the state for costs not incurred by Kitchell.

The original contract was very unclear on the mechanism for payment of overtime work which was billed by Kitchell. Amendment 1 to the contract, dated June 1, 1983, added language that the "consultant shall be reimbursed for actual hours worked . . ." However, this change still permitted Kitchell to bill CDC for overtime hours worked but not paid to employees.

Amendment 3, dated May 9, 1984, reduced the hourly compensation rates paid by the CDC for hours billed as overtime. The CDC was to pay for overtime hours worked at about one-half of the hourly rate for non-overtime hours. The CDC was still paying for cost not incurred by Kitchell.

Amendment 7, dated July 29, 1985, reduced the hourly rates for Kitchell employees, as follows:

- For employees paid overtime by Kitchell, the hourly rate for overtime was reduced to about one-half of the hourly rate billed for non-overtime hours
- For employees not paid overtime by Kitchell, the hourly rate for overtime was reduced to about one-fourth of the hourly rate billed for non-overtime hours.

None of the amendments eliminated the deficiency of the contract which still requires the CDC to pay Kitchell for costs of overtime which are not incurred by Kitchell.

2. Federal Government Practice Allows Only  
Reimbursement of Actual Overtime Costs

Contracts with the federal government for program and construction management services are based generally upon reimbursable costs plus a negotiated fee. Under such contracts, reimbursement for services is based upon an audited payroll. Overtime payments for salaried employees are normally authorized only for unusual extended efforts in which case the employee often is paid at a straight time hourly rate for authorized hours worked (if provided for in company policy). The employer normally is reimbursed only for actual additional salary costs, including incremental payroll additives, all as defined by the terms of the contract. States participating in projects with federal funds usually follow a similar practice.

3. Kitchell Employee Bonuses are Separately  
Reimbursed as an Employee Benefit, so  
Are Not a Cost of Overtime

Kitchell's salaried employees are paid an annual bonus which is reimbursed to the company as a part of employee benefits authorized by Amendment #7 to the contract. Additional reimbursement to Kitchell for overtime work not paid to the employee is in reality an increase in profit to Kitchell. Such payments are not normally made by governmental or private owners on comparable projects.

We reviewed the total billings for all Kitchell employees who are not compensated for overtime for fiscal years 1985/86, 1986/87, 1987/88, and the first four months of 1988/89. The total amount billed by Kitchell for this overtime was \$253,561. This amount is two percent of the total amount billed by Kitchell to CDC for all employees not compensated for overtime over the same time period.

E. Conclusions

The multiplier of direct salaries, which determines the personnel hourly compensation rates paid by the CDC to Kitchell, has been reduced over the last four fiscal years. The multiplier has been reduced from 3.36 in fiscal year 1985/86 to 3.12 fiscal year 1988/89. However, this multiplier is sixteen percent higher than the average multiplier allowed by Caltrans on all of its current twenty-three engineering consulting contracts. Because of the higher multiplier it appears the compensation rates paid to Kitchell employees on CDC projects may be high.

Although the multiplier is high, the compensation rates which the CDC has effectively negotiated with Kitchell are still less than the compensation rates paid to Kitchell by all of its current California local government correctional clients.

Kitchell is being paid for costs which are not being incurred by the firm. These payments are in accordance with the contract terms as negotiated by the CDC. However, such payments are not common practice in other government work for cost reimbursable type contracts.

**F. Recommendations**

1. As part of its pre-negotiation preparations, the CDC should obtain information on compensation rates and direct salary multipliers paid by other California state agencies for similar engineering work. The CDC should justify the final multiplier negotiated with the program manager, if that multiplier is significantly higher than the multiplier they have obtained.
2. The CDC should revise the program manager's contract to require the program manager to bill each employee based on that employee's direct salary and the negotiated multiplier. This is different than terms of the current contract which allows the program manager to use the same billing rate for all employees within the same discipline. With this recommended change, the CDC then would be billed for actual costs for an employee based upon the agreed upon multiplier negotiated with the program manager.
3. The CDC should revise the compensation terms for future program management and construction management contracts to prohibit payments for costs not incurred. The CDC should consider using compensation terms similar to those now used by the State of Michigan for project management services for correctional and other facilities. A portion of Article 5 - Compensation is reproduced below:

"In consideration of the performance of the contract, the owner agrees to pay the project manager, as compensation for services, an hourly billing rate for each employee providing a direct service.

"The billing rates shall include all costs associated with the employment of personnel, computer services, equipment, related operating expenses, indirect labor, overhead and profit. Sick leave, vacation and holiday pay shall be included in the overhead costs and shall not be billable to the project. A separate billing rate shall be established for overtime that reflects the reduced cost for fringe benefits and support services. Overtime rates will be applied to hours in excess of 40, within a normal work week, when an employee receives overtime pay. Billing rates will remain fixed for the duration of the contract."

4. At the annual renegotiations of existing contracts for program management and construction management, the CDC should eliminate payments for overtime which are not related to increased costs of overtime to the contractor.

## IV.

**CERTAIN METHODS OF OPERATION OF THE CDC  
NEW PRISON PROGRAM COULD BE IMPROVED**

The Department of Corrections has structured an organization for the overall management of the project as shown on **Exhibit IV-1**, on the following page. As program manager, Kitchell has responsibility for detailed execution of the project from initial planning through award of the final construction contract. A separate construction manager then has responsibility for detailed execution of the construction program for each new prison. The CDC, under the direction of its project director, has responsibility for managing the overall program, managing the two prime contractors (the program manager and construction manager), and for coordination and integration of CDC and contractor work efforts.

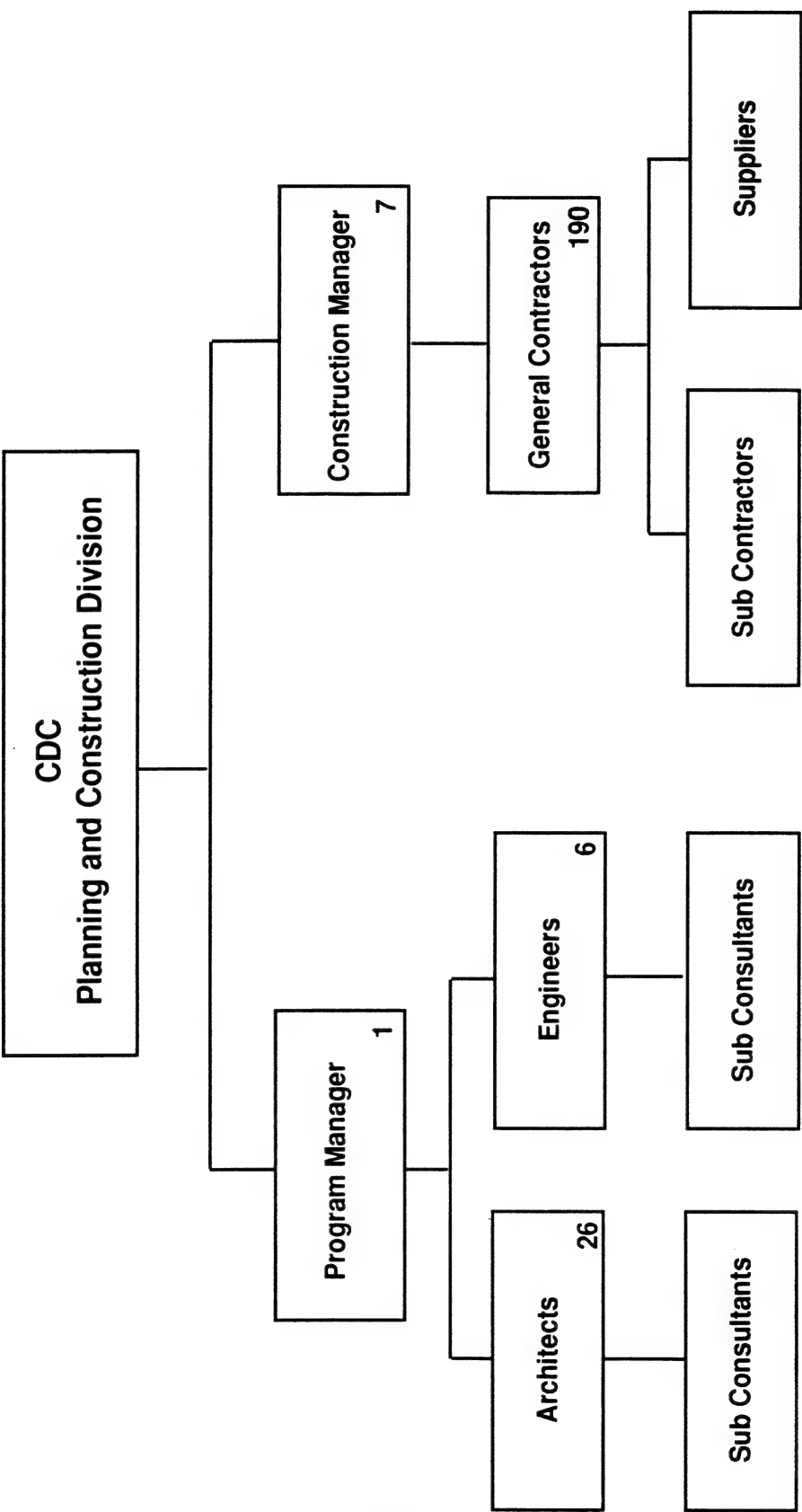
Traditionally, program managers usually have operated as an overall manager of the design firms and construction contractors, or as a part of an integrated project team. The organization currently in place at the CDC assigns basic responsibility for cost and schedule control to both the program manager and the construction manager at different stages in the project. The Department of Architecture (DOA) has been assigned responsibility for on-site quality control. Financial and budgetary responsibility remains with the CDC, with assistance from the consultants only as assigned or as requested.

While the CDC's chosen organization has been effective in delivering new prison capacity, the potential for interface gaps or misunderstandings is increased. The following comments are intended to point out some areas which could benefit from a more formal and planned interface.

**A. Cost Reporting Methods**

Kitchell currently is responsible for preparing the original budget and the current/actual budget (estimate at completion), along with other necessary information. The cost control report prepared by Kitchell is defined in **Exhibit E-1**, in Appendix E.

California Department of Corrections  
Organization Chart



*Numbers shown indicate number of firms currently under contract with CDC.*

The cost control report was found to work well throughout the stage of the program manager's responsibility which is until all contracts have been awarded. After award of the last construction contract, the construction manager is assigned responsibility of managing and forecasting the construction contract costs. For example, on the Corcoran prison, the latest cost control report prepared by Kitchell is dated February 16, 1988, whereas construction is still in progress.

The construction manager prepares a monthly progress and other reports which provide information regarding construction costs. These reports are in a different format than the reports prepared by Kitchell. In addition, the CDC prepares a capital outlay report and a budget summary report which presents financial management information necessary to comply with various state requirements.

Each of the above cost reports present information in a somewhat different format, depending on the needs of the user. Discussions with management personnel from all three organizations indicate that the project manager, the construction manager, and the CDC project director do not have access to a single report issued monthly which forecasts the estimated cost at completion for a new prison in understandable detail in a manner similar to the cost control report. Kitchell's cost control report is only updated at the request of the CDC. The CDC has taken the position that as long as projects are within the contingency allowance for contracts, no periodic update of the cost control report is required.

Moreover, the cost control report includes details of other costs and potential expenditures which are not associated with the construction contracts which also require updating. Even with this additional detail, the cost control report does not present a current picture of contract change orders and estimated costs at completion for the various contracts on a monthly basis, unless the report is updated at the request of the CDC.

Comparable projects in both federal agencies and in private industry would continue to issue project cost control reports in their original format on a monthly basis throughout the project until final completion. The cost control report prepared by Kitchell, if updated monthly, would be a valuable tool to help manage costs in the latter construction stages of a project when surprises are often encountered. It also would be of great value to the CDC and the program manager in the planning of new projects and

in realization of learning curve benefits on a current basis. This report would be particularly important for projects which do not benefit from the prototypical construction experience to date, such as hospitals, medical facilities, and reception centers.

**B. Project Schedule Report Methods**

The monthly progress report prepared by the construction manager presents a comprehensive and detailed schedule analysis. However, a management summary schedule, updated monthly, comparing the actual program with the planned phasing/bid package strategy for the prison would be helpful to the CDC and program manager. This schedule should list the status and forecast completion for each of the occupancy phases and construction milestones as initially planned by the program manager.

With a management summary schedule, updated monthly, the CDC, the construction manager, and Kitchell could help manage the projects more efficiently with current information. As the reports are currently presented they are confusing and may not serve their intended purpose as a management tool.

**C. Post-Occupancy Reviews**

With the exception of a solicitation of operator comments which was initiated by the Kitchell project manager on Corcoran, no formal post-occupancy reviews have been done. According to the CDC it is premature to perform a post-occupancy review before Corcoran is completely occupied. Post-occupancy reviews, if kept current, can be invaluable to assist the program manger in planning new projects and in enhancement of learning curve improvements.

**D. Conclusions**

The CDC designed organization which places overall management control by the state through its project director and functional departments has been effective. However, it is believed that for improved continuity certain functions provided by the

program manager should be assigned formally through completion of construction, rather than remaining at the option of the individual CDC project director and functional staff.

E. Recommendations

1. The program manager should be directed to review the current cost control report and the construction manager's monthly progress report. He/she should make recommendations to the CDC for modifications to one or both of these reports so that a current and accurate forecast of the at-completion cost of each new prison can be issued monthly. The construction manager's report should be formatted to index directly into the program manager's cost control report.
2. The program manager should be directed to review the construction manager's monthly progress reports and make recommendations to the CDC on a standard format for reporting actual summary level progress on construction and occupancy milestones. The format also should forecast completion and occupancy dates in a manner consistent with original objectives as developed on each new prison. The CDC is currently developing such a standardized report format.
3. Post-occupancy reviews should be implemented in accordance with procedures already written. It was understood that the review is initiated by the CDC. The program manager should be actively involved in the process and act on the results where design is affected.
4. In order to implement the above recommendations, it is recommended that the program manager and necessary staff be directed to monitor overall cost, schedule, and quality considerations in support of the CDC project director throughout the project. These reviews could be expected to range from part-time involvement of one person to full-time involvement of several individuals. The continuity obtained by this change could be cost-effective for each individual prison, as well as for the new prison program as a whole.
5. Top management of the CDC, the program manager, and the construction manager could benefit from a summary level overview monthly report summarizing cost and schedule status, and forecasts for each project. The current cost control reports and monthly schedule reports as currently issued by Kitchell for Phase III prisons (Los Angeles 1, Los Angeles 2, Madera, Imperial, Wasco, and Delano) could be combined, with some reduction in detail. Such a summary report could be effective in communicating the overall status of the six Phase III prisons. The report should be issued monthly until final construction completion.



A request for proposals for a program manager firm to assist the CDC in future phases of the new prison program is to be issued in 1989. The possibility of another program manager being selected indicates that an early implementation of the above recommendations would be desirable for overall continuity.

## AUDIT RESULTS

## V.

KITCHELL CEM DID NOT INCUR THE MINIMUM LEVEL OF DIRECT EMPLOYEE BENEFIT EXPENSE AS SPECIFIED IN THE CONTRACT AND, THEREFORE, THE BILLING RATES USED BY KITCHELL SHOULD BE REDUCED RETROACTIVELY

For the period January 1, 1983 through June 30, 1988, Kitchell CEM (and its predecessor, Rosser/Kitchell), charged CDC on a per-hour basis for time worked providing service to CDC. The hourly rates and classifications of staff were negotiated by CDC and Kitchell. The hourly rates vary by classification (e.g., principal, estimator, or engineer) and are to include Kitchell's salary costs, employee benefit expense, overhead, and profit. The contracts between CDC and Kitchell for the contract years ended June 30, 1986, 1987 and 1988 state that if Kitchell does not pay certain employee benefits (e.g., payroll taxes, insurance, and bonuses) of at least a specified percentage of direct salaries, CDC will retroactively reduce the billing rates used by Kitchell.

Based on our examination of Kitchell's supporting documentation for these employee benefits, we have determined that Kitchell's employee benefit expenses were less than the contract minimums for the 1986, 1987, and 1988 contract years. Therefore, CDC has the right to retroactively reduce the billing rates for Kitchell CEM personnel who charged time to CDC in the contract years ended June 30, 1986, 1987 and 1988.

A. The Contract Establishes a Minimum Level of Employee Benefits Based on a Defined Percentage of Direct Salary

Beginning with the contract year ended June 30, 1986, Kitchell's contract with CDC has included a provision relating to the employee benefits which Kitchell pays to its employees. The contract and subsequent amendments stated that if Kitchell did not pay

employee benefits of at least equal to a minimum percentage of direct salaries, CDC would retroactively adjust the billing rates used by Kitchell to compute labor charges billed to CDC. The minimum percentage of direct salaries in each of the three contract years is as follows:

- Fiscal year 1985/86 - 40.0 percent
- Fiscal year 1986/87 - 40.7 percent
- Fiscal year 1987/88 - 42.0 percent

Employee benefits are defined in Amendment 7 as payroll taxes, life insurance, health care, vacation, holiday, sick pay, workers' compensation, bonuses, retirement plan, education, health club, and long term disability. Bonuses are limited to ten percent of direct salaries.

**B. The Contract Was Unclear on  
Several Points Related to the  
Benefit Categories**

Amendment 7 to the contract contains the following language concerning employee bonuses:

"Bonuses may only be paid to employees in approved positions and shall not exceed 10% of direct salaries."

The term "approved positions" is not defined, and could be interpreted to mean only those Kitchell CEM employees who have been explicitly approved by CDC to work on the CDC contract. This would appear to be contrary to the intent of the benefit formula, which is intended to apply to Kitchell CEM in total, not just those Kitchell employees working on the CDC contract.

The ten percent of direct salaries limitation could be interpreted to be either ten percent of direct salaries in aggregate, or ten percent of each person's direct salary. If it is to be ten percent of salaries in aggregate, Kitchell could potentially direct the bonuses to only a few employees, instead of spreading the bonus among all personnel.

Also, there is no contractual time limit for Kitchell to disburse any bonuses that are accrued (reported as expense but not paid). To illustrate, we found that Kitchell accrued \$65,000 in bonuses for the contract year ended June 30, 1987 but did not pay these bonuses until December 1988. Without a time limitation on when bonuses are to be paid, there is the potential for Kitchell to accrue bonuses up to ten percent of direct salaries each year, even though payment of these bonuses may not occur until years later.

We discussed these points with the CDC and Kitchell, and they have both concluded that the current contract allows Kitchell to pay bonuses of up to ten percent of salaries in aggregate, distributed at the company's discretion, and allows these expenditures when determining if Kitchell has met the minimum level of employee benefit expenses. We used this interpretation when determining what level of bonus expense was acceptable. However, as there could be other interpretations of this section of the contract, the bonus provisions should be clarified in future contracts.

Amendment 7 to the contract lists education as an eligible employee benefit but does not define what types of expenses are allowable as education. Therefore, it is difficult for both CDC and Kitchell to determine exactly what types of expenses should be considered qualified education expenses when determining if Kitchell has met the minimum level of employee benefit expenses. For purposes of our testing, we considered expenses such as tuition, seminars, and training classes to be acceptable as education expenses.

C. **Kitchell CEM's Employee Benefit  
Expenses Were Less Than the  
Minimums in the Contract**

In order to determine Kitchell's actual employee benefit expenses for the three years in question, we first looked at the contract to determine what types of expenses were eligible and if there were any other limitations, such as the ten percent limit on bonuses. For purposes of this report, actual employee benefit expenses are those expenses that are both incurred by Kitchell and eligible under the terms of the contract. We obtained supporting documentation from Kitchell, tested for math accuracy, and tested this documentation by performing such procedures as tracing to canceled checks, payroll tax filings, and invoices. Accruals were reviewed for

reasonableness, and we determined that all accrued bonuses were paid as of December 1988.

A summary of Kitchell's actual expenses by category for each year is shown in **Exhibit V-1**, following this page. Kitchell's employee benefits expenses were less than the contract minimums for the 1986, 1987 and 1988 contract years. This does not mean that Kitchell is in violation of a contract provision because Kitchell is not required by the contract to pay the minimum level of employee benefits expenses. However, if Kitchell does not pay the minimum level of employee benefits expenses, CDC has the right to retroactively reduce the billing rates used by Kitchell and seek recovery of the difference between the labor charges billed by Kitchell using the unadjusted contract rates and the labor charge computed using the retroactively adjusted rates.

We have retroactively adjusted the labor billings for 1986, 1987 and 1988, taking into account the actual level of employee benefits paid by Kitchell. The reduction in billing rates results in amounts to be recovered from Kitchell as shown below:

- \$ 57,862 for the contract year ended June 30, 1986
  - \$169,612 for the contract year ended June 30, 1987
  - \$ 76,036 for the contract year ended June 30, 1988
- \$303,510

The calculation of the amount to be recovered is shown on **Exhibit V-2**, following **Exhibit V-1**. We discussed these amounts with Kitchell, and they generally agree that the amounts presented are correct except for education expenses. We disallowed certain expenses claimed as education expenses because we felt they were not allowed under the terms of Kitchell's contract. However, Kitchell believes certain expenses were eligible and would increase the allowable education expenses by about \$40,000.

#### D. Conclusions

Kitchell did not pay the minimum level of employee benefits as defined in their contract with CDC. Therefore, the hourly billing rates used should be reduced retroactively. The fact that Kitchell did not pay the minimum level of employee benefits expenses does not in itself mean that Kitchell is in violation of their contract

**KITCHELL CEM EMPLOYEE BENEFIT EXPENSES**

Category	Fiscal Year Ended June 30,		
	1986	1987	1988
Payroll taxes	\$ 259,602	\$ 316,952	\$ 339,535
Life insurance	23,836	32,591	35,154
Health care	148,188	205,636	247,761
Vacation	138,456	170,268	178,887
Holiday	144,844	142,955	161,656
Sick pay	68,147	73,547	91,679
Workers' compensation	46,801	59,148	53,882
Bonus	321,992	324,802	416,016
Retirement Plan	46,999	31,822	66,821
Education	31,877	56,916	37,218
Health club	10,561	17,366	9,666
Long term disability	<u>2,033</u>	<u>4,232</u>	<u>11,864</u>
Total employee benefits	\$1,243,336	\$1,436,235	\$1,650,139
Kitchell CEM salaries	\$3,219,916	\$3,972,703	\$4,160,155
Total employee benefits as a percentage of Kitchell CEM salaries	38.6%	36.2%	39.7%
Contract minimums	40.0%	40.7%	42.0%

## CALCULATION OF RETROACTIVE BILLING ADJUSTMENT

	Fiscal Year Ended June 30,		
	1986	1987	1988
Total employee benefits as a percentage of Kitchell CEM salaries from Exhibit I-1	38.6%	36.2%	39.7%
Minimum percentage per contract	40.0%	40.7%	42.0%
Total labor billed to CDC by Kitchell CEM	\$5,786,154	\$5,303,194	\$4,694,398
Divided by employee benefit multiplier included in labor rates used by Kitchell CEM (1 + minimum percentage per contract)	1.400	1.407	1.420
Base labor plus overhead and profit	\$4,132,967	\$3,769,150	\$3,305,914
Times adjusted employee benefit multiplier based on actual employee benefit expenses incurred by Kitchell CEM	1.386	1.362	1.397
Adjusted labor bill	\$5,728,292	\$5,133,582	\$4,618,362
Amount due to CDC (actual labor billed minus adjusted labor bill)	\$ 57,862	\$ 169,612	\$ 76,036

with CDC. The contract does not specify the mechanism that is to be used to reduce the billing rate or to recover any amounts that may be due to CDC. Also, the timing of the CDC examination of Kitchell's actual benefit expenses is not defined, so it is unclear as to when CDC is to calculate or collect amounts that may be due to them.

E. Recommendations

1. CDC should retroactively adjust the billing rates to be used by Kitchell CEM for 1986, 1987 and 1988 based on the actual amount of employee benefit expense incurred by Kitchell CEM. These adjusted rates should be applied to the hours charged by Kitchell CEM to determine amounts due to CDC. We estimate the amounts to be recovered will be \$57,862, \$169,612 and \$76,036, for the 1986, 1987 and 1988 contract years, respectively.
2. The CDC should clarify certain contract items with regard to bonus and education expenses. For bonuses, the contract should state who is eligible to receive bonuses and how they are to be divided among the eligible personnel. If the distribution is at Kitchell's discretion, this should be noted in the contract. The contract should have a time limit for paying accrued bonuses. When determining what an appropriate time limit should be, CDC should consider their own timing for reviewing Kitchell's benefits, so that accrued bonuses are paid before CDC internal auditors arrive at Kitchell. The types of educational expenses that will be considered acceptable should be clearly defined, so that both CDC and Kitchell will know what is allowable.
3. The mechanism to be used by CDC to reduce the billing rates and collect any amounts due should be defined in the contract. If it involves adjusting the employee benefit multiplier, then the original multiplier and supporting calculations should be incorporated into the contract.
4. The contract should establish the timeframe for CDC to review Kitchell's actual expenses related to employee benefits. CDC's review of these items can only decrease the billing rates used by Kitchell, so it is to CDC's advantage to determine the actual level of these expenses as quickly as possible.



**VI.****KITCHELL CEM'S BILLINGS TO THE  
CDC ARE GENERALLY IN ACCORDANCE  
WITH THE TERMS OF THE CONTRACT**

For the period January 1, 1983 through June 30, 1988 Kitchell CEM (and its predecessor, Rosser/Kitchell), charged the CDC on a per-hour basis for time worked providing services to the CDC, based on hourly rates and classifications of personnel as negotiated by the CDC and Kitchell. The hourly rates vary by classification (e.g. Project Manager, Project Engineer, and Planner) and are to include Kitchell's direct salary costs, employee benefit expenses, overhead, and profit. In addition, Kitchell is allowed to pass through to the CDC certain costs directly as reimbursable expenses. The amount of labor and the amount and type of reimbursables which can be charged vary by contract year.

Amendments 11 (contract year ended June 30, 1987) and 14 (contract year ended June 30, 1988) allow the CDC to verify that insurance and equipment costs submitted by Kitchell during the negotiation process are accurate. If the CDC finds that actual costs are less than those submitted by Kitchell, then the billing rates in the contract will be retroactively reduced.

We found that, in general, Kitchell is properly billing the CDC for labor and reimbursable expenses.

**A.   The Contract Establishes  
     Parameters for Labor and  
     Reimbursable Expense Billings**

The original contract, dated July 21, 1982, stated that Kitchell would be paid a lump sum of \$926,500 for services to be rendered from July 21, 1982 through December 31, 1982. Beginning with Amendment 1 (effective January 1, 1983), Kitchell is required to bill the CDC for actual time worked by Kitchell staff using rates and classifications of personnel as defined in the contract. In addition, the contract specifies the types of

reimbursable expenses that Kitchell can bill to the CDC. Both the labor charges and reimbursable expenses are subject to limitations as to how much Kitchell may bill in any one contract year.

Amendments 11 and 14 give the CDC the right to verify that insurance and equipment costs submitted by Kitchell during the 1987 and 1988 contract negotiations are accurate. If the actual costs are less than those submitted, then the billing rates in the contract will be retroactively reduced. The contract does not specify what the dollar amount of these costs are, when the CDC will verify that the costs are accurate, the methodology to be used to reduce the rates nor how the CDC is to collect any refund that may be due from Kitchell.

**B. Kitchell's Billings Are  
Generally In Accordance With  
The Terms of the Contract**

In order to evaluate Kitchell's billings under the contract, we prepared a schedule listing all of the billing-related terms in the original contract and subsequent amendments. Since January 1, 1983, labor has been billed on a per-hour basis, and reimbursable expenses are submitted for payment based on Kitchell's actual cost incurred. An initial analysis of the bills indicated that labor billings accounted for approximately ninety percent of the amounts paid to Kitchell by the CDC.

Our testing of the labor billings included overall review procedures and detailed tests of individual labor charges. First, we summarized the monthly labor bills for each contract year and compared them to the maximum allowable labor charges for the year. We also reviewed the labor bills for reasonableness and checked the math accuracy of a sample of the bills. No problems were noted in this phase of the testing.

The detailed testing of the monthly labor bills was performed by statistically selecting a sample of 94 "individual labor charges" from the period January 1, 1983 through June 30, 1988. An "individual labor charge" is defined as one individual's labor bill for one month. This labor bill is calculated by multiplying hours billed to the CDC by the contractual billing rate as established in the contract for that person. The contractual billing rate is determined by the employee's classification (e.g., Project Engineer, Planner). The sum of all of the "individual labor charges" for a month is the total monthly labor bill.

In order to determine that the "individual labor charge" was appropriate, all three components of the charge (hours billed, labor rate, and math accuracy) were tested. The first component was the hours billed. We traced the total hours billed for the month to individual timesheets.

The second component was the labor rate. Kitchell's contract sets labor rates based on the classification of the employee. These rates are reduced if the employee is working overtime. In order to verify that the rate was appropriate, we traced the rate on the bill to the contract amendment appropriate to that month. To determine that the classification of the employee was accurate, we reviewed personnel files for resumes, approval from the CDC to use that employee on the CDC project at that classification, and other supporting information that would help to verify the existence of the employee. If the employee was in an overtime situation on the bill, we checked to see that the labor rate was reduced accordingly.

The third component was math accuracy, which was tested by multiplying hours billed by the labor rate.

Based on the statistical sample we found that Kitchell is properly billing labor charges in accordance with the provisions of the contract. The hours charged were supported by timesheets, and the labor rates used were appropriate. We found some instances where labor bills were disallowed by the CDC due to circumstances such as a lack of available funding for particular projects, but these amounts were minor in relation to the total labor bill and were frequently accepted by the CDC through a rebilling process. We did not find any instances where Kitchell charged the CDC for time which should have been charged to other Kitchell clients.

The statistical sample of labor charges did not include charges for "Quick Build" engineering services provided by Kitchell under contract Amendments 8 and 9, as these charges were billed separately under a lump sum arrangement. We reviewed invoices relating to these services and found that they were within the contract maximums.

To determine if reimbursable expenses billed were appropriate, we compared the amounts billed by category to the contract, and determined if Kitchell billed the CDC for reimbursable expenses in excess of contract maximums. We also reviewed a sample of EDP and special consultant charges to determine if they were supported by invoices.

We found that reimbursable expenses billed to the CDC by Kitchell were within the contract maximums.

For our sample of EDP and special consultant charges, the reimbursable expenses billed were supported by invoices. For EDP, the invoices are primarily based on costs internally generated by Kitchell, such as salaries of EDP personnel and depreciation of EDP equipment. We did not find any instances where Kitchell billed the CDC for reimbursable expenses which should have been billed to other Kitchell clients.

C. The CDC Has the Right to Verify Kitchell's Insurance and Equipment Costs Submitted During the 1987 and 1988 Negotiation Process, and to Retroactively Reduce Billing Rates

Amendments 11 and 14 state that insurance and equipment costs submitted by Kitchell during the negotiation process are subject to verification by the CDC, and if the actual costs are found to be less than those submitted, billing rates will be reduced retroactively. The contract does not specify the dollar amounts of the costs submitted by Kitchell, or the timing or mechanism to be used by the CDC in computing the amount or recovery of any potential refund.

D. We Could Not Determine What Costs Kitchell Had Submitted

In order to verify that Kitchell actually incurred the equipment and insurance costs submitted during the 1987 and 1988 negotiation process, we first attempted to determine what costs had been submitted. Kitchell was unable to provide us with any definitive information as to what costs had been submitted. The CDC had some internally prepared working papers related to the 1987 and 1988 negotiations, but we could not determine from these exactly what Kitchell had submitted as equipment and insurance costs. Therefore, we are unable to conclude as to whether Kitchell's actual insurance and equipment costs are less than those submitted during the negotiation process.

**E. Conclusion**

Kitchell is properly billing labor charges and reimbursables in accordance with the provisions of the contract. The hours charged were supported by timesheets and the labor rates used were appropriate.

Reimbursable expenses billed to the CDC by Kitchell were within the contract maximums.

We were unable to determine whether Kitchell's actual insurance and equipment costs were less than those submitted during the negotiation process, as we were unable to conclude as to what costs were submitted.

**F. Recommendations**

1. The CDC should include in the contract a clear definition of the two overhead items (equipment and insurance) which are currently subject to verification, and the exact dollar amount of these overhead items. In addition, all other overhead items which are included in the multiplier should be defined in the contract, and the expense should be subject to verification. These other overhead items would include rent, administrative salaries, and telephone expense.
2. The CDC should establish in the contract the timeframe for their internal auditors to review Kitchell's actual expenses related to agreed upon overhead items which may cause the billing rates to be reduced retroactively. The CDC's review of these items can only decrease the billing rates used by Kitchell, so it is to the CDC's advantage to determine the actual level of these expenses as quickly as possible.

3. The mechanism to be used by the CDC to reduce the billing rates and collect any amounts due should be defined in the contract. If it involves adjusting the overhead multiplier, then the original multiplier and supporting calculations should be incorporated in the contract.

**APPENDIX A**  
**DELIVERY PERFORMANCE OF SELECTED NEW PRISONS**  
**IN OTHER STATES**

One measure of Kitchell's performance as program manager is the success of meeting original budgets and schedules for California's new prison construction program. Based upon our review, Kitchell's overall cost performance complied fully with contract requirements. Its scheduling of new prisons is rated very good, and it has met the critical need to bring new prison capacity on-line quickly.

For comparison, we reviewed new prison construction programs in five other states and attempted to identify comparable prison facilities. We selected the following states for review based on the assumption that states with large populations might have new prison construction programs comparable to California:

- Alabama
- Arizona
- Illinois
- Michigan
- Texas.

The information regarding new prison construction in other states was gathered from telephone interviews of personnel within the respective state's department of corrections, and from two A/E firms working for different states. Unfortunately, telephone interviews and correspondence did not allow us to perform as rigorous an examination of these programs as we did with the California new prison construction program.

Although California's new prison program is the largest in the nation, on a smaller scale many states are building new prison facilities to accommodate their growing prison population. A great deal of weight cannot be put on a comparison between California's prison program and programs in other states because it is difficult to make meaningful comparisons between individual prison facilities.

**APPENDIX A**  
**DELIVERY PERFORMANCE OF SELECTED NEW PRISONS**  
**IN OTHER STATES**  
**(Continued)**

Instead of comparing the costs of other state prisons with California's new prisons, we compared the performance of completing the prison within the original budget and time schedule. Table 1, below, presents the results of this analysis, showing the Corcoran prison and new prisons from five other states.

**Table 1**  
**Comparison of Corcoran and the Prisons in the**  
**Six Other States**

State Prison	Design Bed Capacity	Actual Cells	Percent Over/(Under) Budget	Percent Over/(Under) Schedule	Actual Schedule (Months)
California (Corcoran)	2,916	2,524	(7)	7	36
Texas	2,250	1,419	12	7(b)	28(c)
Alabama	1,536	768	0	48(b)	37
Illinois	896	840	0	0(b)	33
Michigan	528	528	0	0(b)	26
Arizona	250	0(a)	0	0(b)	29

(a) This prison consists of all dormitory housing.

(b) As reported in interviews with state officials. It was difficult to obtain documentation of the original planned schedule for any of the new prisons.

(c) 28 months for a prison with a design bed capacity of 2,250 appears relatively fast in comparison to Corcoran. The State of Texas was under court order to complete the prison and have it occupied by September 15, 1987. This gave the design and construction effort high priority. Also, the State of Texas new prison program does not provide as much vocational, education, recreation, and other support space or as many programs as California does. For example, the architectural area of the Texas prison is 684,381 gross square feet while Corcoran has an architectural area of 1,533,322 gross square feet.



**APPENDIX A  
DELIVERY PERFORMANCE OF SELECTED NEW PRISONS  
IN OTHER STATES  
(Continued)**

To present a more complete comparison of design bed capacity, Table 1 includes the actual number of cells in each prison. This is necessary because California counts one bed for every cell (based upon accepted correctional standards) when in reality cells may be designed to have two beds (to accommodate overcrowding). On the other hand, when Texas and Alabama list design bed capacity for a prison, they are counting two beds per cell for a significant percentage of the cells.

The comparison of actual budget and schedules of the above prisons against their respective estimates indicates that the performance of Kitchell in helping to build Corcoran within budget and schedule is very good. If the many differences in scope and correctional programs of the new prisons is considered, the performance at Corcoran is especially noteworthy.

The actual schedules of the other prisons, measured from the beginning of design through construction completion, demonstrates the success achieved in California's new prison construction program in shortening total project completion time. The other states, while building prisons of significantly smaller scale, and typically only one or two prisons at any one time, have had longer or comparable schedules.

The relative success of Corcoran (and other new prisons in California) is due in large part to Kitchell's method of planning the total project schedule. Instead of using the traditional sequential method of project management where construction begins only after all design work is complete, prisons in the California new prison construction program are built using a fast-track or phased method. This means that the project is designed and constructed in various bid packages. This allows contracts to begin on completely designed packages, while other bid packages are still in design.

The overlapping of the design, bid, and construction phases results in a significant savings in project completion time. The illustration on the next page shows what the difference might be in total project schedule time for the same prison under both methods of project schedule management.

**APPENDIX A**  
**DELIVERY PERFORMANCE OF SELECTED NEW PRISONS**  
**IN OTHER STATES**  
**(Continued)**

**SEQUENTIAL METHOD**

| Design Phase | | Bid Phase | | Construction Phase |

**FAST-TRACK METHOD**

| Design Phase |  
| Bid Phase |  
| Construction Phase |

A major barrier in comparing new prisons in other states to new prisons in California is that other states are not building prisons as large as the prisons in California. Table 1 showed the extreme differences in design bed capacities between Corcoran and other state prisons which were started and completed between 1982 and 1988. Corcoran is considerably larger than all of the new prison facilities in the states reviewed. The larger scope of Corcoran with its multiple design firms presents more possible obstacles to overcome in accomplishing original budget and schedules than are found at new prison facilities of a smaller scope. A comparison of individual prisons with such wide differences in scope is of limited value.

While Texas has completed two new prisons since 1982 with design bed capacities closer to Corcoran than the other states we reviewed, a comparison of Texas prisons to Corcoran reveals another problem. States do not all conform to the same correctional design standards. The American Correctional Association has design standards for constructing prisons that many states choose to follow while other states ignore the ACA design standards completely. For instance, unlike California, Texas does not build its new prisons to American Correctional Association standards for day room space per inmate. California provides 35 square feet of day room space per inmate whereas Texas only provides 17.5 square feet per inmate. This type of difference in design standards makes comparisons based on cost per bed, inmate, or prison meaningless.

**APPENDIX A**  
**DELIVERY PERFORMANCE OF SELECTED NEW PRISONS**  
**IN OTHER STATES**  
**(Continued)**

Comparisons of cost per bed, inmate, or prison are further complicated by the costs incurred as a result of the type and number of industries at the different prisons. The significantly larger and more secure inmate population at Corcoran requires more and varied types of vocational programs and industries than do the smaller prisons in other states. For instance, Corcoran has twelve different vocational programs and nine different industries. On the other hand, the Texas facility has only six different vocational programs and two industries, and the Michigan facility has three vocational programs and one industry.

**APPENDIX B**

**DESCRIPTION OF THE  
CALIFORNIA STATE PRISON IN  
KINGS COUNTY AT CORCORAN**

**MISSION**

The California State Prison in Kings County at Corcoran will provide necessary incarceration and services for approximately 1,500 medium security (Level III) inmates, 1,024 maximum security (Level IV) inmates, and 392 minimum security (Level I) inmates.

Programs will be developed so that all Level III and IV inmates will be able to participate in industrial, vocational, or educational training programs. Generally, the intention will be to expose inmates to relevant and transferable work skills, reduce idleness, and provide some income to inmates and their families.

The institution's design will provide secure incarceration while maintaining safe conditions for inmates, staff and visitors.

**DESCRIPTION**

The inmate population will be divided into manageable, decentralized groups. The Prison's medium security inmates will be accommodated in three, 500-bed facilities inside the institution's Level III complex, and maximum security inmates will live and work within two, 512-bed facilities in the Level IV complex, all within a double-fenced security perimeter. Minimum security inmates will occupy four 96-bed dormitory facilities and an eight-bed firehouse outside the security perimeter.

Each medium and maximum security facility will operate semi-autonomously, providing for the housing, work, recreation, and support service needs of its inmates. At each Level III facility, the medium security inmates will be accommodated in housing units containing 100 single cells. The design will be the Level III Prototype 270 degree Housing Unit. For reasons of security, control, and manageability, the Level IV housing units will be different. Each unit will be subdivided into modules containing no more than 44 cells.

The housing units within each facility will share common areas for industrial programs, vocational training, academic education, hobby/handicrafts, library service, religious services, recreation, canteen, clothing distribution, and routine health services. Level III housing units will share common dining halls, while each Level IV unit will contain dining areas.

**APPENDIX B**

**DESCRIPTION OF THE  
CALIFORNIA STATE PRISON IN  
KINGS COUNTY AT CORCORAN**

**(Continued)**

**DESCRIPTION  
(Continued)**

Designated Prison Industry Authority programs include heifer raising, a dairy, milk processing, furniture assembly, sewing jeans, general fabrication, spice production, and a laundry.

Educational and vocational training will be available to Level III and IV inmates who demonstrate a need and desire for further education. Vocational programs are anticipated to include dry cleaning, welding, electronics, baking, computer training, carpentry, machine shop practices, sewing machine repair, sheet metal, culinary arts, auto body repairs, and upholstery.

Economical staffing patterns will be provided by using inmates for various support functions. These jobs include building maintenance and food service. Level I inmates will work jobs that are not suitable for medium or maximum security inmates and which would otherwise require staff, such as warehousing and vehicle maintenance. These jobs will be located outside the security perimeter to prevent mixing inmates of different security classifications.

Buildings and fences will separate one facility from another within the double-fenced security perimeter. In addition, a double fence will run down the middle of the Prison further separating the Level III complex from the Level IV complex.

To increase efficiency and cost effectiveness, and to maximize the use of inmate labor, some functions will be centralized and will serve the entire Prison. These functions include central food preparation, laundry, receiving and release, the infirmary, the central library, and the Prison Industry Authority administration. Inmates using services not within their own facility (e.g., the infirmary) will not have access to the rest of that facility.

All administrative and staff services, warehousing, and major maintenance operations will be located outside the institution's security perimeter. These include central administration, business services, personnel, procurement, accounting, case records, the main mail room, in-service training, firing range, staff services, staff dining, visitor processing, warehouses, and vehicle maintenance.

**APPENDIX B**

**DESCRIPTION OF THE  
CALIFORNIA STATE PRISON IN  
KINGS COUNTY AT CORCORAN  
(Continued)**

**DESCRIPTION  
(Continued)**

The Level I facility will contain four housing units, each with dayrooms, showers, and dormitories. The dormitories will have furnishings and equipment appropriate for minimum security inmates. The minimum security facility will have its own programs, support services, and visiting areas. Level I inmates will have access to many parts of the Prison outside of the security perimeter due to their lower security classification and need to circulate on their support service jobs, but will be unable to mix with inmates in the other facilities.

A site for a visitor center will be located within a reasonable distance from the visitor processing center, but off the main traffic flow into the institution. The visitor center facility will be funded, built, and operated by a private, non-profit agency.

**LOCATION**

The site for this prison is a 960-acre parcel approximately one mile south of Corcoran in Kings County and one-quarter mile west of California Highway 43.

**DESIGN  
CAPACITY**

Facility	Inmate Custody Level	Design Bed Capacity
III A	Medium	500
III B	Medium	500
III C	Medium	500
IV A	Maximum	512
IV B	Maximum	512
I	Minimum	<u>392</u>
Total		2,916

**SCHEDULE**

First occupancy of the Level III complex was February, 1988. The Prison will be fully operational in January, 1989.

**ORIGINAL BUDGET**    \$272,300,000

APPENDIX C

KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN

Months from Design Start Date	Date	Activity/Decision Point	Cost Estimate (\$000's)
-5	9/24/85	Assembly Bill No. 225 authorized prison near Corcoran and exempted the facility from the California Environmental Act	
-2	Dec. 85	Preliminary cost estimate by Kitchell	
	1/3/86	Corcoran Project Planning Guide (PPG) with Program and Cost Model prepared Estimated cost	\$253,670
-1	1/21/86	Corcoran added to Five Year Plan 1985-90, Occupancy to begin in FY 1986-87 and be completed in FY 88-89	\$253,670
0	Feb. 86	Project Start	
	3/1/86	Start design development drawings, Dreyfuss, Blackford, Henningson, Durham & Richardson for Level IV housing	
	3/4/86	Start design development drawings, CH <sub>2</sub> M Hill as subconsultant to Giffles, Del Campo & Maru for site engineering	
	3/6/86	PPG (1-3-86 version) approved by CDC	
	3/7/86	Start design development drawings - NBBJ Group for central administration and Level IV processing	

**APPENDIX C**

**KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN  
(Continued)**

<b>Months from Design Start Date</b>	<b>Date</b>	<b>Activity/Decision Point</b>	<b>Cost Estimate (\$000's)</b>
<b>1</b>	<b>3/18/86</b>	<b>1st design package - 100% design development complete</b>	
	<b>3/28/86</b>	<b>1st package submitted to Public Works Board (PWB) (sitework only)</b>	
	<b>4/12/86</b>	<b>Start design development drawings - Hope Consulting for towers and Level III housing</b>	
<b>2</b>	<b>4/23/86</b>	<b>Start design development drawings - Gutierrez/Martinez for warehouse</b>	
	<b>5/6/86</b>	<b>1st submittal package approved by PWB-JPCC</b>	
<b>3</b>	<b>5/17/86</b>	<b>Start design development drawings - Giffles, Del Campo &amp; Maru for support and PIA facilities</b>	
	<b>5/27/86</b>	<b>1986-91 Five Year Plan - Corcoran data sheets state occupancy to be in phases from 16 to 27 months from appropriation since full appropriation had not yet been received</b>	<b>\$253,700</b>
	<b>5/30/86</b>	<b>Start design development drawings - Richardson/Voinovich for Level III Admin, Serv./Prog./Ed.</b>	
	<b>6/9/86</b>	<b>Project Cost Report #1 As of 6/6 - estimated cost:</b>	<b>\$247,328</b>



APPENDIX C

KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN  
(Continued)

Months from Design Start Date	Date	Activity/Decision Point	Cost Estimate (\$000's)
4	6/13/86	2nd Submittal package to PWB with Level III Housing. Schedule: first occupancy, 16 months and final occupancy, 27 months (after appropriation)	
	6/19/86	Architectural program completed for Corcoran Level III	
	7/10/86	Site bid package, 1.1, out to bid	
5	7/17/86	Project Cost Report #2 As of 7/3/86 - estimated cost:	\$248,583
6	8/20/86	Assembly Bill 4356 signed authorizing lease purchase funding of Corcoran facility	
	9/9/86	Project Cost Report #3 As of 8/13/86 - estimated cost:	\$251,565
	9/9/86	Start construction site work, Package 1.1	
7	9/16/86	Ground breaking	
8	10/26/86	3rd submittal to PWB including Level I Housing and Level III PIA	
9	11/14/86	Project Cost Report #4 As of 10/31/86 - estimated cost: (Now includes PIA cost, & change of Level IV housing from General Population to SHU)	\$254,417

APPENDIX C

KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN  
(Continued)

Months from Design Start Date	Date	Activity/Decision Point	Cost Estimate (\$000's)
10	12/6/86	Start design development drawings - YEI for Cogeneration Facilities	\$253,842(a)
	12/6/86	4th submittal to PWB including East Section sitework	
	12/6/86	Combined Bid Package A out to bid	
	12/19/86	Project Cost Report #5 As of 12/19/86 - estimated cost:	
11	12/26/86	5th submittal to PWB including co-generation	\$244,479(a)
	1/21/87	Combined Bid Package B out to bid	
	1/28/87	Project Cost Report #6 As of 2/5/87 - estimated cost:	
	2/9/87	Start construction Level III Housing, Combined Bid Package A, (4 A/E packages)	
12	Feb. 87	Equipment list issued	\$235,936(a)
	2/13/87	Project Cost Report #7 As of 2/16/87 - estimated cost:	
	2/27/87	6th submittal to PWB - Level IV Housing	
	3/6/87	Project Cost Report #8 As of 3/5/87 - estimated cost:	
			\$237,916(a)

**APPENDIX C**

**KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN  
(Continued)**

<b>Months from Design Start Date</b>	<b>Date</b>	<b>Activity/Decision Point</b>	<b>Cost Estimate (\$000's)</b>
<b>13</b>	<b>3/16/87</b>	<b>Project Cost Report #9 Asa of 3/16/87 - estimated cost:</b>	<b>\$237,730 (a)</b>
	<b>3/20/87</b>	<b>7th submittal to PWB - Level IV Support</b>	
	<b>3/27/87</b>	<b>Notice to Proceed with Combined Package B, kitchen and Level III F.S.S., Level I Housing</b>	
<b>15</b>	<b>5/1/87</b>	<b>1987-92 Five Year Plan - Corcoran data sheet, occupancy January 1988 through December 1988</b>	<b>\$272,300</b>
<b>15</b>	<b>5/15/87</b>	<b>Project Cost Report #10 As of 5/15/87 - estimated cost:</b>	<b>\$243,887 (a)</b>
	<b>6/5/87</b>	<b>Project Cost Report #11 As of 6/5/87 - estimated cost:</b>	<b>\$240,594 (a)</b>
<b>16</b>	<b>6/17/87</b>	<b>Project Cost Report #12 As of 6/17/87 - estimated cost:</b>	<b>\$239,526 (a)</b>
	<b>7/13/87</b>	<b>Level IV Housing Bid Package 5.2 out to bid</b>	
<b>17</b>	<b>7/20/87</b>	<b>Project Cost Report #13 As of 7/20/87 - estimated cost:</b>	<b>\$239,013 (a)</b>
<b>18</b>	<b>9/1/87</b>	<b>Project Cost Report #14 As of 8/24/87 - estimated cost:</b>	<b>\$241,094 (a)</b>

APPENDIX C

KITCHELL CEM'S ACTIVITIES AND DECISION POINTS RELATED  
TO CALIFORNIA STATE PRISON IN KINGS COUNTY AT CORCORAN  
(Continued)

Months from Design Start Date	Date	Activity/Decision Point	Cost Estimate (\$000's)
19	9/14/87	Notice to proceed with Level IV Housing, Bid Package 5.2	\$250,783
20	Mid Oct. 87		
	11/3/87	Project Cost Report #15 As of 11/3/87 - estimated cost:	
21	Mid Nov. 87		
22	12/23/87	Notice to proceed with last of 24 design packages, Package 5.1, for Level IV Visiting & Control	
24	2/88	1st occupancy - Level III-3A	\$254,608 (a) (b) (Funds reverted: \$17,700)
25	3/88	Occupancy - Level III-3B	
	3/21/88	Last Kitchell schedule printout - Revision 13	
	3/28/88	Project Cost Report #16 (last Kitchell prepared cost report) As of 2/16/88 - estimated cost:	
27	5/88	Occupancy - Level III-3C	
34	12/5/88	Start occupancy - Level IV-B	
35	Mid Jan 89 (c)	Start occupancy - Level IV-A	
36	Feb 89 (c)	Complete construction	

(a) Includes estimate of PIA costs for comparison to a revised total original budget of \$272,308,610 which includes the PIA cost budget of \$18,638,743. (\$253,669,867 + \$18,638,743 = \$272,308,610).

(b) Also includes hospital at \$10,142,010 which has not yet been approved.

(c) Forecasted.

APPENDIX D

CONTRACT SCOPE OF SERVICES

This exhibit outlines the specific scope of work provisions extracted from Agreement No. C82.4.1.010 (changed to C82.525.3.06) dated 21st day of July 1982 by and between the Department of Corrections and Rosser/Kitchell. Crossed items and bold face text shows modifications by Amendment #1 dated 1st day of June, 1983.

ARTICLE 2. SCHEDULES AND REPORTS

- a. Promptly after execution of this Agreement, Consultant shall present a plan for developing a Capital Outlay Program Management Plan and an Information and Control System for status and progress reports to the Department of Corrections. Five copies of this plan shall be furnished.
- b. Consultant shall furnish the State with Monthly Status and Progress Reports for each correctional institution having capital outlay projects, with schedules for each project. These reports shall combine the activities of the CDC, Physical Planning and Construction Division, Construction Management, and legislative actions that affect CDC's Capital Outlay Program. Consultant shall make recommendations to CDC with time lines for the following month. Eight copies of each report shall be furnished the first of each month.
- c. Consultant shall prepare a Five Year Facilities Capital Improvement Program. This report shall be updated annually after amendment of the Agreement. State will provide printing.
- d. Consultant shall furnish the State with a schedule of activities to be engaged in between the date of this Agreement and December 31, 1982. Furnish five copies.
- e. Consultant shall furnish the State such other reports, schedules, and plans as directed by CDC.

ARTICLE 5. PROGRAM MANAGEMENT SERVICES OF CONSULTANT

a. GENERAL SERVICES

The basic professional services of the Consultant will be to assist the State with the ~~overall~~ management of the new prison capital outlay programs, ~~for correctional facilities throughout California.~~ All services shall be undertaken only upon expressed notification by the State.

**APPENDIX D**  
**CONTRACT SCOPE OF SERVICES**  
**(Continued)**

The Consultant will be part of the States management system for budgeting, property acquisition, planning, programming, design, and construction in keeping with administrative and legislative objectives. The Consultant will assist, oversee this work under the direction of the Department of Corrections.

**b. SPECIFIC SERVICES**

The Consultant shall:

- (1) Furnish Schedules and Reports as described under Article 2.
- (2) Provide professional management advice to State, ~~under the direction of the State,~~ and prepare correspondence for State's Administrators, to insure uniform direction and control of the facilities expansion program consistent with its capital outlay program. Such advice and assistance will include, ~~if directed by the State, continuing review and updating the of long range facilities master requirements plans,~~ the development and application of program standards and criteria, and recommended procedures for the ~~overall~~ execution of the new prison capital outlay program.
- ~~(3)~~ Develop standard correctional programs for institutions of each inmate classification level, mission, and function, and when requested by State, provide programs for specific facilities.
- ~~(3)(4)~~ Under the direction of the State, Develop formats, guidelines, and standards for architectural programs to be prepared by State's Architects, and provide review of their work.
- ~~(4)(5)~~ Assist State in ~~overseeing and controlling~~ monitoring the activities of State's Architects and Construction Managers. Provide recommended schedules. ~~and formats with which Architects and Construction Managers will report on progress and budget status of specific projects.~~
- ~~(5)(6)~~ Develop construction standards for materials and equipment applicable to correctional facilities. These standards shall be updated annually, ~~upon specific request by the State. Develop design criteria for standard facility components for use by the Architects in preparing design documents. Attend~~ Conduct design review meetings conducted by the Construction Managers and advise the State in writing of correctional design deficiencies.

APPENDIX D

CONTRACT SCOPE OF SERVICES  
(Continued)

(b) SPECIFIC SERVICES (Continued)

- (6)(7) Recommend criteria for selection of Architects and other consultants in accordance with State Regulations, and when requested assist CDC in review of submittals, proposals, and fees.
- (8) Identify regulatory and approval agencies and officials involved in the execution of the capital outlay program; analyze their requirements; and prepare advice for design consultants regarding any limitations or parameters which may impact facility design.
- (9) Conduct seminars at major correctional facilities to demonstrate the latest in prison design adopted by the State for new facilities. These seminars shall be directed to CDC staff who will ultimately operate the prisons. In addition, these seminars will serve to obtain comment and feedback from institutional staff regarding their problems and advice about design concepts, detention equipment, and operational matters.
- (10) Develop and implement a systematic means of assisting CDC to select and train operating personnel in new facility procedures, equipment use, and maintenance.
- (7)(11) Assist State and the Construction Manager in the development and implementation of a comprehensive financial control system for accounting of all appropriations and capital outlay projects. Develop recommended management control systems and techniques to control time, cost, and quality of the new prison total capital outlay program and individual projects, including master and project-specific schedules, estimating procedures, value engineering methods, and information collection and reporting systems.
- (12) Develop procedures and assist the State in real estate acquisition of prison sites in support of State's system performance objectives. Identify real estate acquisitions need and criteria; and advise CDC regarding timely execution of the site acquisition process. Assist the State in determining the need for approvals, permits, environmental impact reports (EIR), and take necessary action to obtain same as required by State.

APPENDIX D

CONTRACT SCOPE OF SERVICES  
(Continued)

(b) SPECIFIC SERVICES (Continued)

- (8) Page 2, Article 5b(13), of amendment dated December 1, 1982 is renumbered (8) and is revised to read:

"Consultant, in execution of program management services for the State, may hire special consultants for specific professional services within the scope of this agreement that are not available within the Consultant's organization, state service, or other consultants under contract to the State. In obtaining such services, Consultant shall solicit at least three fee proposals and submit a written listing of all fee proposals to the State. In obtaining such services, Consultant shall solicit at least three fee proposals and submit a written listing of all fee proposals to the State. In cases where fee proposals cannot be obtained, the reason why multiple fee proposals were not obtained (sole source justification) and an explanation of how the reasonableness of rates was determined shall be submitted in writing to the State. Consultant shall comply with all State policies and procedures for awarding such contracts including the State's policy of giving preference to small and minority businesses. In no event shall Consultant hire a special consultant without receiving prior written approval from the State.

All agreements between Consultant and the special consultants must be in writing and include at least a detailed description of the services to be performed, the rate of payment and the cost ceiling."



**APPENDIX E**  
**COST CONTROL REPORT**  
**DEFINITION OF COLUMNS PRESENTED IN REPORT**

**Original Budget: (Column 1)**

This column presents the original cost estimate for the new prison. The original budget column should reflect the assumptions made at the beginning of the project and the anticipated costs for each item. This column will remain the same throughout the entire project.

**Approved Budget: (Column 2)**

This column should reflect the dollar amount approved by the Public Works Board.

**Previous Budget: (Column 3)**

This column reflects the cost for each line item used in the last issue of the cost control report.

**Current/Actual Budget: (Column 4)**

This column reflects the current estimated project costs. It may include a combination of actuals and estimates. Estimates will be replaced by actuals whenever a contract award is made. A five percent contingency will be displayed for each bid package. Contingency transfers will be displayed as a separate line item in this column and will reflect a cumulative amount.

**Budget Change (Current/Previous): (Column 5)**

This column reflects the difference between the current estimate (4) and the previous estimate (3).

**Percent Budget Change (Change/Previous): (Column 6)**

This column indicates the percentage of change between the previous estimate (3) and the current estimate (4).

**Budget Variance (Current/Original): (Column 7)**

The purpose of the budget variance column is to reflect the difference between the current estimate (4) and your original project estimate (1).

**APPENDIX E**  
**COST CONTROL REPORT**  
**DEFINITION OF COLUMNS PRESENTED IN REPORT**  
**(Continued)**

**Percent Budget Variance (Current/Original): (Column 8)**

This column indicates the percentage of change between the original project estimate (1) and the current estimate (4).

**Gross Square Footage: (Column 9)**

Specifies square footage by line item used in current estimate.

**Cost Per Square Foot: (Column 10)**

Indicates cost per square foot used in current estimate.

**Previous Square Feet: (Column 11)**

Provides the square footage used on the last cost control report.

**Percent Change Square Feet: (Column 12)**

This column indicates the percentage of change between the current square footage (8) and the previous square footage (11).

PROJECT : 10480  
DATE : 23-Aug-88  
TIME : 09:55 AM

KITCHELL C E M  
COST CONTROL REPORT

PAGE : 5  
REVISION : 17

10580  
CSP @ DEL NORTE COUNTY

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ORIGINAL BUDGET	APPRVD BUDGET	PREVIOUS BUDGET	CUR/ACT BUDGET	BUDGET CHANGE	BUDGET CHANGE	BUDGET VARIANCE	BUD VAR	GROSS SQUARE	COST/ SQUARE	ORIGINAL SQUARE	CHANGE SQUARE
21-OCT-86		04-MAR-88	21-MAR-88	(CUR-PREV)	(CHNG/PREV)	(CUR-ORG)	VAR/ORG	FT	FT	FEET	FEET

OVERHEAD COSTS

(03)

A/E - ONSITE	5,316,863	7,509,321	7,616,440	7,733,519	117,079	2,416,656	45.45	0	0.00	0	0.00
* A/E - OFFSITE	617,206	1,868,562	2,144,287	2,448,775	304,488	1,831,569	296.75	0	0.00	0	0.00
OSA - ONSITE	3,543,226	4,068,407	4,068,407	3,710,632	-357,775	167,406	4.72	0	0.00	0	0.00
* OSA - OFFSITE	176,345	296,837	296,837	296,837	0	120,492	68.33	0	0.00	0	0.00
CM - ONSITE	4,429,032	5,285,070	5,285,070	5,330,221	45,151	901,189	20.35	0	0.00	0	0.00
* CM - OFFSITE	220,430	385,606	385,606	385,606	0	165,176	74.93	0	0.00	0	0.00
PROGRAM MGR - ONSITE	3,543,226	2,499,458	2,499,458	1,223,525	-1,275,933	-51	-2,319,701	-65.47	0	0.00	0.00
* PROGRAM MGR - OFFSITE	176,345	176,475	176,475	176,475	0	130	0.07	0	0.00	0	0.00
MISC - ONSITE	3,543,226	1,321,251	1,321,251	1,572,470	251,219	-1,970,756	-55.62	0	0.00	0	0.00
* MISC - OFFSITE	176,345	464,530	464,530	464,530	0	288,185	163.42	0	0.00	0	0.00
PIA - OVERHEAD	189,300	189,300	189,300	189,300	0	0	0.00	0	0.00	0	0.00
TOTAL	21,931,544	24,064,817	24,447,661	23,531,890	-915,771	-4	1,600,346	7.30	0	0.00	0.00

TOTAL OVERHEAD COSTS	21,931,544	24,064,817	24,447,661	23,531,890	-915,771	-4	1,600,346	7.30	0	0.00	0.00
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TOTAL PROJECT COST	232,643,908	225,020,598	206,998,798	209,747,216	2,748,418	1	-22,896,692	-9.84	1193446	175.75	1265658	-5.71
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COST PER BED ( 2280)	89,966	83,006	77,777	77,452								
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NOTE - ORIGINAL COST PER BED @ 91,859 BASED ON 2242 CELLS.

(1) UNIT RATES BASED ON: KCEM DATA BASE/OTHER PROJECTS  
10% AREA/LOCATION/WEATHER FACTOR  
6% ESCALATION FOR CONSTRUCTION MID POINT OF FALL '88

(2) A/E FEE DISTRIBUTED: PIA OVERHEAD 88,089  
MISC. CONSULT. 792,734  
BALANCE 10,182,294

TOTAL 11,063,117

# Kitchell CEM

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January 24, 1989

Office of the Auditor General  
660 J Street, Suite 300  
Sacramento, California 95814

Re: Audit of the California Department of Corrections  
Program Management Contractor

Gentlemen:

Thank you for the opportunity to respond to the draft final report of the subject audit.

Overall we are very pleased with the audit results. Our belief that the program management contract between the Department of Corrections and Kitchell CEM is an effective example of a public-private cooperative venture has been validated by the review of your experts.

There are a few areas to which we would like to respond specifically.

The finding expressed on pages S-1, S-2 and III-4(c) with respect to the multiplier negotiated in the contract in our opinion is somewhat misleading. The conclusion that Kitchell CEM multipliers are higher than an average of multipliers obtained on CalTrans engineering contracts implies that the Kitchell CEM multipliers are too high, when in fact they are competitive.

First, the finding compares Kitchell CEM's single contract with an average of others and the average fails to communicate clearly the range from which it was established. The CalTrans multiplier ranged from 2.09 to 3.28, the highest nearly 7% higher than the Kitchell CEM multiplier used in the comparison. The highest CalTrans multiplier is 22% higher than the average!

Additionally, there is no discussion of the types of CalTrans contracts in the average. For example, if these contracts allow for reimbursement of expenses which are included as overhead costs in the Kitchell CEM contract, then a lower multiplier would be expected.

Moreover, if Kitchell CEM's actual fringe benefit costs continue to be less than estimated, then the actual multiplier for Kitchell CEM will be less than the rate used to compare to the CalTrans contracts.

With this many variables involved in the comparison, we think a better conclusion is "the Kitchell CEM multiplier falls within the range of multipliers negotiated on 23 CalTrans engineering contracts."<sup>①</sup>\*

The issue of overtime payment has been considered numerous times from the standpoint that businesses generally do not provide service at no cost and, therefore, should be paid for overtime hours. Likewise, most of Kitchell CEM's staff are professional engineers and architects who are paid on a salaried basis and, like most professionals, receive no overtime pay. We believed that the Department of Corrections had dealt fairly with this issue in controlling the amount of overtime hours and payment through specific contract provisions. Additionally the report states that for cost plus agreements overtime is paid only to the extent that additional costs are incurred. The current Kitchell CEM contract is not a cost plus agreement but a fixed unit price contract for services rendered. The Department of Corrections establishes the level of staffing and work flow which anticipates the completion of work in a 40 hour week. Overtime is worked in response to the unexpected need of the Department of Corrections and uneven workload throughout the year. The overtime is not anticipated in the manpower planning for the contract and has amounted to less than 2% of the billings.

It should be noted also that when the Department of Corrections pays Kitchell CEM for overtime in accordance with the contract, the billing rate for this work is significantly reduced in recognition of reduced costs incurred by Kitchell CEM.<sup>②</sup>

Clarification of allowable items for employee benefits, such as education expenses, is welcome since this issue has contributed to your findings that the benefits paid were less than the estimate included in the contracts. If these matters are clarified, our estimates of costs for employee benefits overall will be improved since we will know precisely what costs are allowable.

The report points out the possibility of confusing language regarding the payment of bonuses. We feel that the decision on how to pay bonuses should not be directed by the Department of Corrections but remain a benefit pool to be administered by Kitchell CEM.

We will continue as we have always to cooperate fully with the Department of Corrections to verify any and all of our costs which

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\* The comments of Arthur Young about Kitchell CEM's response appear following this letter.

Office of the Auditor General  
January 24, 1989  
Page 3

contribute to the establishment of the multiplier. We welcome any additional clarity that can be obtained in this area. However, the recommendation that the contract should define all overhead items is not consistent with the practice found at CalTrans. The report states that CalTrans does not dictate to firms the types of costs they should include in overhead. Implementation of this recommendation may not be practical and is possibly the reason for the practice followed by CalTrans.③

The report's recommendation to avoid the use of design/construct contracts and performance standards (Page II-13) refers to the cogeneration plant at Corcoran. The issue at Corcoran, however, is one of equipment performance, which could occur with any contracting method and is not a result of the use of design/construct. Cogeneration plants traditionally are delivered by the design/construct method. The advantage of this approach is that accountability for performance is focused on a single contractor rather than dispersed to separate design, bid and construct contracts. We still believe this approach for cogeneration will enhance the Department of Corrections' ability to enforce the accountability and resolve any remaining issues regarding equipment operations and plant design.

In conclusion, we believe our work with the Department of Corrections is and has been a tremendous benefit to the State of California. In cooperation with and at the direction of the Department of Corrections, we have endeavored to produce an efficient and effective prison construction program. The findings of this audit bear out the success of this effort.

Sincerely,



Clarence F. Vaughn, P.E.  
President

**THE ARTHUR YOUNG COMMENTS  
ON THE RESPONSE OF KITCHELL CEM**

We are commenting on Kitchell CEM's response to our audit report to provide clarity and perspective to Kitchell's exceptions to our report. The numbers correspond to numbers we have placed in the department's response.

- ① We point out in our report that Kitchell's multiplier falls within the range of multipliers allowed by Caltrans. However, of the twenty-three Caltrans contracts we reviewed, one had a multiplier higher than Kitchell's while twenty-two had a multiplier lower than Kitchell's.

Our comparison of Kitchell's multiplier to the average of all of Caltrans engineering consulting contracts is valid even if the components included in overhead are considered. We reviewed a sample of the twenty-three Caltrans contracts and did not find a direct relationship between the type of costs included in overhead and the magnitude of the multiplier. Some of the Caltrans contracts that have a multiplier lower than Kitchell include many of the same costs (i.e., data processing expenses) as Kitchell does in their overhead. Kitchell's negotiated overhead percentage has slightly decreased over the last four fiscal years, although the firm now includes data processing expenses in overhead.

- ② Although the California Department of Corrections has reduced the rate paid to Kitchell for overtime hours worked this does not justify payment to Kitchell for costs they did not incur. Any payment by the CDC to Kitchell for overtime hours worked when Kitchell does not compensate the employee results in an increase of the negotiated profit percentage.

- ③ There is some confusion on the part of Kitchell concerning our recommendation. We are not recommending that the CDC dictate to the program manager the types of cost included in their overhead. Rather, the program manager will provide a list of the costs to be included in their overhead. We are recommending that whatever cost are included should be clearly defined and subject to audit by the CDC.

# Memorandum

Date : January 26, 1989

Telephone: ATSS (     )  
(     )

To : Kurt R. Sjoberg  
Acting Auditor General  
Office of the Auditor General  
660 J Street, Suite 300  
Sacramento, CA 95814

From : **Youth and Adult Correctional Agency**  
Office of the Secretary

Subject: COMMENTS - AUDIT OF THE CALIFORNIA DEPARTMENT OF CORRECTIONS' PROGRAM  
MANAGEMENT CONTRACTOR

Thank you for the opportunity to comment on your draft report entitled "An Audit of the California Department of Corrections' Program Management Contractor." We have viewed this report to be an opportunity for a productive review of the performance of our capital program manager, Kitchell CEM (Kitchell), and the Department of Corrections (CDC). We were hopeful that this review would accomplish this evaluation in context with the aggressive program goals and objectives, including the number and size of projects, schedules and budgets, and program quality expectations. As you know, this \$3.2 billion program involves the planning and construction of over 37,000 new prison beds, encompassing 20 new prison projects and 3,170 beds added through expansion projects and camps.

We are not disappointed. While the auditors have identified a number of findings that will certainly serve to improve our operational and contract management, they have done this in the context of the overall achievements of this program and in recognition that there has been continued improvement over the last six years. I am extremely pleased to see that in their analysis, they state our management of this program from a budget perspective "represents an outstanding performance for a public sector program pioneering a new conceptual approach designed to shorten design construct schedules as well as decrease costs." Relative to schedule management, the auditors further state, "Overall schedule performance is rated very good when compared to other public and private sector projects." As the Corcoran project was closely evaluated, we were also pleased that when compared to prison projects in other states, the auditors state that "the performance at Corcoran is particularly noteworthy."

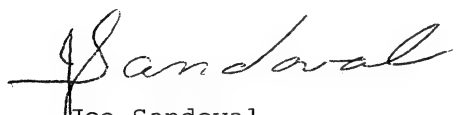


Kurt R. Sjoberg  
Page 2

I believe this certainly confirms that the public-private sector partnership which has been used to plan and manage this \$3.2 billion program has been a very effective approach.

Regarding the specific findings presented in your report, we would like to offer the attached comments and information.

Again, thank you for the opportunity to comment. If you would like to discuss our comments, please contact Craig L. Brown, Undersecretary, at 3-6001.



Joe Sandoval  
Secretary

Attachment

AN AUDIT OF THE  
CALIFORNIA DEPARTMENT OF CORRECTIONS (CDC)  
PROGRAM MANAGEMENT CONTRACTOR  
CDC RESPONSE

SECTION I - KITCHELL CEM'S OVERALL APPROACH AS PROGRAM MANAGER REPRESENTS A  
HIGH DEGREE OF COMPETENCY IN KITCHELL'S ASSIGNED  
PRE-CONSTRUCTION RESPONSIBILITIES

Audit Recommendations:

1. Present efforts to reduce the number of design and construction packages at the site consistent with schedule requirements should continue in order to minimize interface problems.

CDC Response:

We concur. Our intent is to continue efforts to reduce the number of design and construction packages to the extent that it is consistent with schedule requirements for each facility.

2. Kitchell should be requested to analyze and review each contract change order and schedule change during construction in order to provide prompt feedback for future projects and to enable a critique of initial planning concepts.

CDC Response:

We concur. As the audit indicated, CDC and Kitchell have implemented a process to ensure that each contract change order and schedule change is analyzed and reviewed for potential implication to future projects.

3. Kitchell should be requested to produce Monthly Cost Control and Monthly Schedule reports throughout the construction phase on all projects for which the firm performed initial planning. Currently, these reports are issued only upon CDC requests after the last bid package has been awarded.

CDC Response:

CDC has previously considered the benefit of consolidating existing schedule and budget reports. However, as we are concerned about controlling all costs of a project, including consultant fees, we had previously determined that the relative benefits may not justify the additional expense. As the auditors stated, the cost and schedule information is currently contained in several different reports. These serve several purposes, including forming the basis for establishing cost limits as well as periodically projecting expenditures to determine when and if additional cost control or value engineering efforts are needed. While CDC staff and management are quite familiar with these and similar schedule tools, we recognize that there is certainly some benefits that would result from this recommendation and will reconsider our prior decision to maintain separate reports.

SECTION II - KITCHELL CEM'S PERFORMANCE OF ITS CONTRACT RESPONSIBILITIES IS ACCEPTABLE

Audit Recommendations:

1. Design Monitoring - Kitchell should use the detailed information available from the original design negotiations to monitor the progress of some A/E firms. The program manager should develop a performance measurement system based on the completion of certain specified tasks and in accordance with an agreed upon schedule with the A/E firm.

CDC Response:

We concur and will implement this recommendation.

2. Design-Construction Contracts on Fast-Track Projects - The CDC should not competitively bid contracts for both design and construction of projects based on conceptual performance standards for fast-track applications. Rather, the CDC continue the practice of negotiating with the most qualified firm for design work and then competitively bid construction from the completed design. This recommended method is the approach CDC most often uses for its new prison program.

CDC Response:

As stated in this recommendation, this approach is the practice followed by CDC on virtually all of the construction work. It is only in isolated situations such as cogeneration projects, where highly technical equipment comprises the bulk of the project, that we have utilized a performance specification process. It is our understanding that the problems encountered are equipment performance problems that could occur despite the contracting methods. We are not certain that a change in contracting methods is appropriate. We must evaluate this recommendation and the circumstances further before we determine an appropriate course of action.

SECTION III - THE MULTIPLIER OF DIRECT SALARIES NEGOTIATED WITH KITCHELL IS HIGH, ALTHOUGH KITCHELL'S COMPENSATION RATES ARE LOWER THAN RATES THE FIRM CHARGES OTHER GOVERNMENT CLIENTS

CDC Response:

There are several factors related to this finding for which we would like to provide additional information. First, the multiplier CDC negotiated with Kitchell is within the range (2.09 to 3.28) of Cal Trans contracts used for comparison. By definition, a number of the 23 Cal Trans contracts also exceeded the stated average of 2.70. Given the difficulty in making a reliable comparison on only one factor involved in computing the overall State cost, we believe that a comparison to the range is certainly more relevant than a comparison to the average.

Secondly, the auditors indicate on page III-9 there are a number of reasons why multipliers will be different between firms, including the fact that inefficient staff may drive lower multipliers. As the audit findings have commended the achievements and performance of Kitchell, this efficiency in staffing levels certainly has been a factor in the multiplier negotiated with Kitchell.

Further, in examining multipliers, it is important to be aware that there may be cost elements that are reimbursed differently, thereby making comparisons difficult at best. For example, Cal Trans staff have advised us that electronic data processing costs are traditionally paid as direct costs outside the multipliers they negotiate. In our contract with Kitchell, these costs are included in the overhead multiplier. With these costs adjusted out to make the multiplier factor comparable to the Cal Trans contracts, the Kitchell multipliers for 1987-88 and 1988-89 would be 2.93 and 2.97, respectively, certainly in the center of the range for the 23 Cal Trans contracts.

Finally, we feel it is most important to look at the total billing rates paid for consultant staff. This is the cost the state pays in total for each hour of service provided. As noted by the audit, CDC is paying Kitchell rates for professional services equal to or less than being charged for their other government correctional clients. This is largely due to procedures put into place at the recommendation of the Auditor General in a 1987 report, which recommended that the Department develop negotiation objectives which include total rates charged by other consultants for similar services. It is these total rates that we feel provided a more realistic comparison than solely the multiplier factor.

#### Audit Recommendations:

1. As part of its pre-negotiation preparations, the CDC should obtain information on compensation rates and direct salary multipliers paid by other California state agencies for similar engineering work. The CDC should justify the final multiplier negotiated with the program manager, if the multiplier is significantly higher than the multiplier they have obtained.

#### CDC Response:

CDC has fully implemented a prior Auditor General audit recommendation to obtain comparable rate information prior to negotiations. We feel a directed review of the multiplier is not as beneficial as a total rate review (as previously recommended by the Auditor General) due to the various reasons that multipliers will legitimately differ. However, we will integrate this recommendation as a portion of our current negotiation preparation process.

2. The CDC should revise the program manager's contract to require the program manager to bill each employee based on that employee's direct salary and the negotiated multiplier. This is different than terms of the current contract which allow the program manager to use the same billing rate for all employees within the same discipline. With this recommended change, the CDC then would be billed for actual costs for an employee based upon the agreed upon multiplier negotiated with the program manager.

CDC Response:

We concur and will implement this recommendation in the next contract amendment. It should be pointed out, however, that the current process whereby rates are developed for classifications of staff rather than for each individual, should result in little or no change in our payment to the consultant. The current process develops billing categories based on the averages of actual salaries for the staff in that category.

3. The CDC should revise the compensation terms for future program management and construction management contracts to prohibit payments for costs not incurred.
4. At the annual renegotiations of existing contracts for program management and construction management, the CDC should eliminate payments for overtime which are not related to increased costs of overtime to the contractor.

CDC Response: .

It is our understanding that recommendations #3 and #4 are in context to charges for services provided during overtime hours. Thus, our response is applicable to both recommendations.

We concur and will implement these recommendations in the next contract amendment. We would like to emphasize that CDC has included reduced billing rates for overtime services in the last three contract years. These overtime billing rates are at one level if overtime is paid to the employee and are at a reduced level if overtime is not paid to the employee. The reduced rates are intended to provide payment for reasonable and variable overhead costs associated with overtime payments. In all cases, the State is receiving the services for which it is paying.

SECTION IV - CERTAIN METHODS OF OPERATION OF THE CDC NEW PRISON PROGRAM  
COULD BE IMPROVED

CDC Response:

The thrust of these recommendations would be to expand the role of the program manager through the life of a project (e.g., through construction completion rather than design completion). As indicated previously, we are concerned about controlling consultant fees as well as the design and construction costs. Currently, Department staff and management have a variety of schedule and cost reports prepared by the program manager, construction managers, and Department staff that are used for project management purposes. Executive staff are regularly briefed, and there is an expectation that staff and managers are knowledgeable in the use of the existing reports and management tools. As the auditors recognized that we are currently following or developing some of the procedures recommended, we have been and will continue to try to improve our management tools and procedures. Accordingly, we will be evaluating each of these recommendations carefully from a cost benefit standpoint.

SECTION V - KITCHELL CEM DID NOT INCUR THE MINIMUM LEVEL OF DIRECT EMPLOYEE  
BENEFIT EXPENSE AS SPECIFIED IN THE CONTRACT AND, THEREFORE,  
THE BILLING RATES USE BY KITCHELL SHOULD BE REDUCED  
RETROACTIVELY

CDC Response:

Relative to employee benefit expenses, the CDC contract with Kitchell establishes an estimated benefit rate for employees. It further recognizes that if the actual cost of the benefit package (medical, dental, etc.) costs less than the estimated level, an adjustment to the billing rate will occur. Any differences would be an appropriate adjustment by CDC. CDC's process for adjustment is based on our own audit of these costs. CDC's auditors will review the workpapers prepared by Arthur Young auditors and initiate recovery under established CDC audit procedures. While CDC has established mechanisms for adjusting billing rates, we concur with the auditors' recommendations that the contract should specify the procedures and timing. We also concur that any expenses which are subject to such adjustments should be clearly delineated in the contract.

SECTION VI        KITCHELL CEM'S BILLINGS TO THE CDC ARE GENERALLY IN ACCORDANCE  
WITH THE TERMS OF THE CONTRACT

Audit Recommendations:

1. The CDC should include in the contract a clear definition of the two overhead items (equipment and insurance) which are currently subject to verification, and the exact dollar amount of these overhead items. In addition, all other overhead items which are included in the multiplier should be defined in the contract, and the expense should be subject to verification. These other overhead items would include rent, administrative salaries, and telephone expenses.

CDC Response:

We concur that for those cost elements which are subject to verification, the exact dollar amount should be included in the contract and will implement this in the next contract.

2. The CDC should establish in the contract the timeframe for their internal auditors to review Kitchell's actual expenses related to agreed upon overhead items which may cause the billing rates to be reduced retroactively.

CDC Response:

We concur that a timeframe be established in the contract for departmental auditors to review Kitchell's expenses. We will insure that the timeframes are attached in future contracts for such audits and that the audits are carried out as scheduled.

3. The mechanism to be used by the CDC to reduce the billing rates and collect any amounts due should be defined in the contract. If it involves adjusting the overhead multiplier, then the original multiplier and supporting calculations should be incorporated in the contract.

CDC Response:

CDC does have processes in place to ensure that overhead items are appropriately verified and that any amounts due back to the Department are collected in a timely manner. We do concur, however, that it would be clearer if these processes were included in contract language.

SUMMARY:

In summary, we are very pleased with this audit. We believe this audit has reconfirmed the organizational and administrative strengths that have been used to manage this massive program while providing insightful and productive recommendations in those areas that improvements can be made.

cc: Members of the Legislature  
Office of the Governor  
Office of the Lieutenant Governor  
State Controller  
Legislative Analyst  
Assembly Office of Research  
Senate Office of Research  
Assembly Majority/Minority Consultants  
Senate Majority/Minority Consultants  
Capitol Press Corps